

THE AMERICAN JOURNAL OF
**CLINICAL
MEDICINE**

Vol. 30, No. 3

MARCH, 1923

MAKE thou *THY* Heaven here;
All the essentials to thy hand convenient
are—

The sunbeam, filtering through green, interlacing
leaves,

The scented flowers, the songs of mating birds,
the star

Reflected in the blue lake's undulating breast,
Mountains, red sunsets, purple nights and moon-
bathed glades—

Surely, no storied Paradise could give thee more!

WITH these, weave intimately children's
smiles,

The faith of woman, the good will of man;
Contentment, Love, Hope, Truth and Work
well done.

So shalt thou dwell, on Earth, in Heaven without
a flaw;

Then, when Death's Tocsin sounds a call for thee,
Step, fearless, forth into the dark unknown

Serenely confident that, having built well here,
The Greater Heaven shall welcome back its own!

G. H. C.

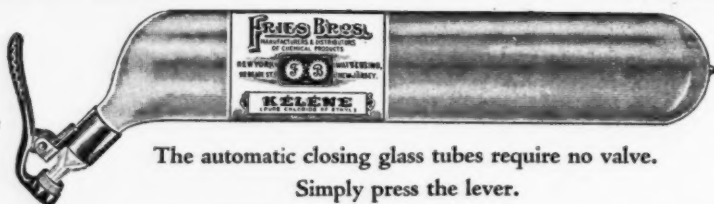
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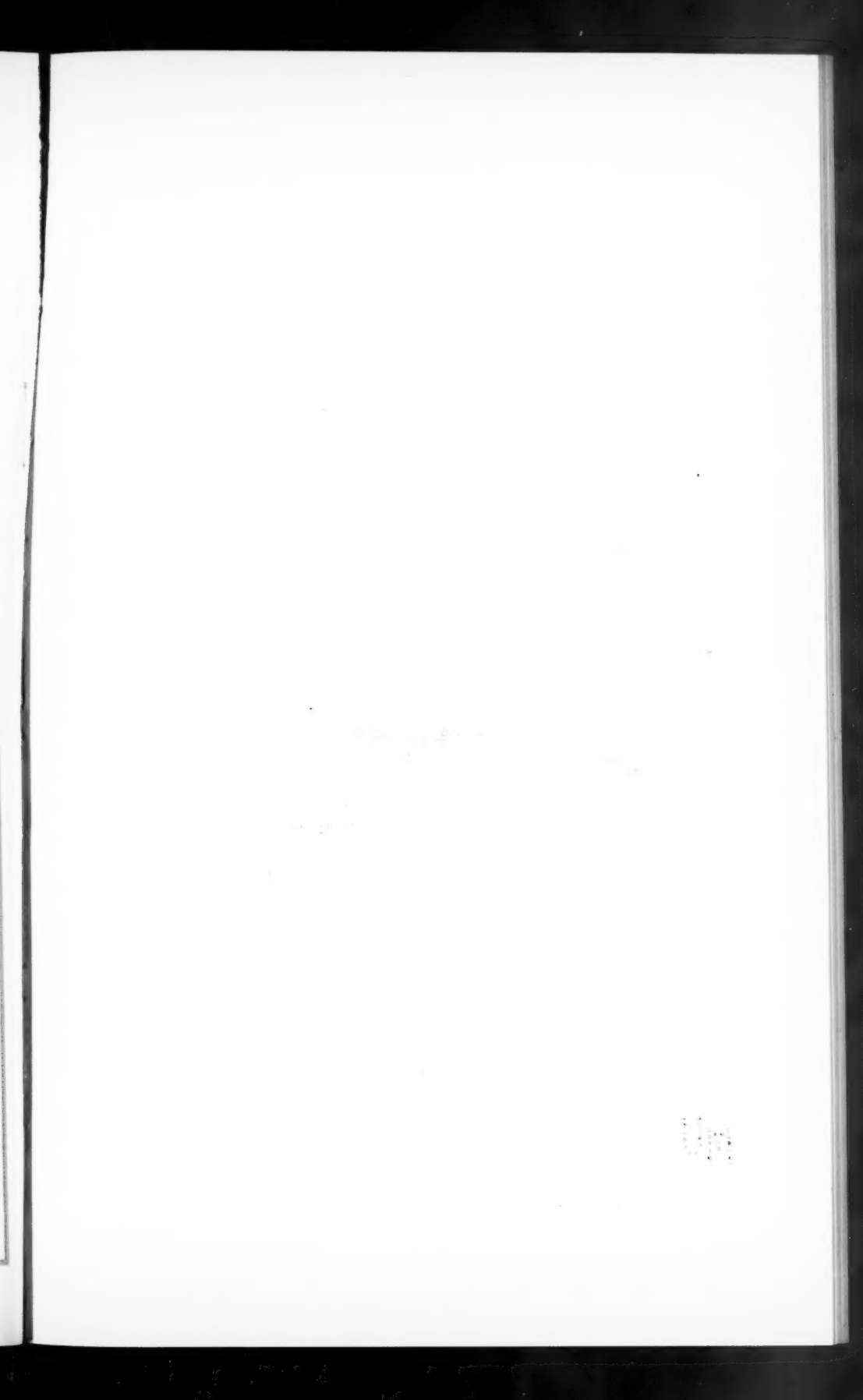
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COLONEL CHARLES LYNCH

The American Journal of **CLINICAL MEDICINE** *Dependable Therapeutic Fact for Daily Use*



Vol. 30, No. 3

MARCH, 1923

Colonel Charles Lynch

COLONEL Charles Lynch was born in New York, March 5, 1868. He graduated in medicine from Syracuse University, in 1891, and passed the competitive examination for first lieutenant in the medical corps of the United States Army about two years later. Five years after that, he successfully passed the examination for the grade of captain.

He held the temporary rank of major from April, 1901, to December, 1902, and was promoted to the same grade in the regular establishment, April 2, 1906. About eight years later, he rose to the grade of lieutenant-colonel and, on May 15, 1917, to the grade of colonel.

Colonel Lynch, while a junior officer, served at divers military posts in a professional capacity. Later, he saw arduous service in the Philippine Islands.

When it was made possible for medical officers to be assigned to duty with the General Staff, an assignment which is considered in all civilized nations as a signal recognition of special ability, Colonel Lynch was the first medical officer so honored. He served with this most important staff organization from 1904 to 1908.

During this tour of duty, Colonel Lynch performed a piece of work which, by its very

nature, did not attract popular attention, but which was fully appreciated for its far-reaching effects by the War Department and by those interested in American military medicine. Colonel Lynch was sent by our government to Japan as an observer during the important war with Russia. He accompanied the Japanese army, witnessed the fall of Mukden, studied the entire medico-military establishment of the Japanese army and returned home, having been honored by the Emperor of Japan with a high military decoration which, under regulations then in force, he could not accept for himself.

There have been other observers, officers of the line and staff, of many nations, who have sent to their respective countries valuable reports of their studies, but Colonel Lynch has prepared a large volume which, in the opinion of experts, is a monument to his analytical mind and patriotism, a work which, to the initiated, meant that we had outgrown the provincialism of the Spanish-American War period and begun to develop into a tremendous nationalism, which manifested itself as a prelude during the Mexican imbroglio and culminated in our gigantic operations in Flanders, the Meuse and the Argonne.

No sooner was Colonel Lynch relieved from

duty with the General Staff, but what another new and honorable assignment was bestowed upon him; namely, that of head of the first-aid department of the American Red Cross. To appreciate the importance of this duty, it is but necessary to point out that, during the Spanish-American War and for some time after, the American Red Cross society was a private sort of an affair which lacked the standing and resources of even small European nations. It was later reorganized under the supervision, protection and control of the government, and then assumed a role of national and international importance. Nevertheless, everything had to be built up from the bottom, and the organization of first-aid teams in great industrial centers, notably the coal mines, and units intended to assist the military in time of war, was fraught with great difficulties, as the service was to be entirely voluntary and the material needs provided by the organizations themselves. In view of all this, an idea of the tact and popularity of Colonel Lynch can be had, when it is told that, when the International Red Cross Conference convened in Washington, a few years after Colonel Lynch had undertaken the task, the most distinguished army, navy and medical officers sent as delegates by their respective countries, in their full-dress uniforms as an unaccustomed setting, witnessed on a huge field a competitive first-aid contest of such magnitude as to express in their official reports astonishment at the progress of the American Red Cross organization which acted as host.

The program on the large athletic field went off without a hitch before the distinguished audience on the amphitheater, except for one instance and that was, when an Illinois first-aid detachment, ninety officers and men strong, suddenly marched to the front, stacked their litters and came to the position of attention. Its commander stepped forward and, in a few well chosen words, addressed first the audience and then the subject of our sketch, who stood in the field taken by surprise, and, in the name of the Illinois Red Cross teams, presented him with a presentation saber as a recognition of his great services to the nation.

Colonel Lynch had written a number of first-aid manuals for the Red Cross, which have been translated into many languages, to meet the requirements of foreign-born laborers and miners.

At about the same time, he became secretary of the Association of Military Surgeons of the United States and editor of its official

monthly journal, *The Military Surgeon*, a magazine which, under his editorial management, received a good deal of literary recognition by the foreign medico-military press.

During the World War, Colonel Lynch served for some time as Department Surgeon of the important Southern Department, but his most noteworthy work was accomplished, as narrated by Dr. Blech, in his Memoirs of the World War, as chief surgeon of the port of embarkation at Newport News, Va., which became a port of debarkation for our returning sick and wounded. He was honored by the War Department for these services with the Distinguished Service Medal.

At the conclusion of the war, Colonel Lynch was assigned to the responsible task of editing the Medical and Surgical History of the World War, a huge task, which is to be a work of even greater importance than the well-known work of a similar character on the Civil War.

Colonel Lynch is now president of the Association of Military Surgeons of the United States and, during the absence of General McCaw, in addition to his other duties, is in command of the Army Medical School.

At an age of barely fifty-five, Colonel Lynch stands out as one of the builders of American medico-military science, a public servant who is a valuable asset to our nation.

INCOME TAXES

The Treasury Department rules and regulations regarding the computation of personal income taxes provide for certain exemptions, deductions and allowances which can be studied by physicians to good advantage.

Section 212 of the Revenue Act of 1918 provides:

"The net income shall be computed upon the basis of the taxpayer's annual accounting period (fiscal year or calendar year, as the case may be) in accordance with the method of accounting regularly employed in keeping the books of such taxpayer; but, if no such method of accounting has been so employed, or if the method employed does not clearly reflect the income, the computation shall be made upon such basis and in such manner as in the opinion of the Commissioner does clearly reflect the income."

This decision evidently indicates the necessity for correct accounting methods on the part of physicians, as well as corporations.

Most physicians are familiar with income tax laws and with supplementary decisions af-

fecting their own returns, but some of the following points may have escaped attention:

If the doctor's office is in his home, he may properly deduct a portion of his living expenses as professional expense for maintaining this office. This deduction may include a reasonable portion of the expense for light, heat, water and janitor service, as well as rent.

Depreciation on the automobile used by the physician for professional purposes is a deductible item, as is, also, the upkeep of this automobile, including gasoline, oil, repairs and garage rent.

The salaries paid to nurses, assistants and office help are properly chargeable to expense. The telephone used for professional service is, also, an item which may be deducted for expense. In this connection, Article 291 of Regulations 62, reads in part:

"In the case of a professional man who rents property for residential purposes, but incidentally receives there clients, patients or callers, in connection with his professional work (his place of business being elsewhere), no part of the rent is deductible as a business expense, if, however, he uses part of the house for his office, such part of the rent as is properly attributable to such is deductible."

Article 104 on Professional Expenses reads:

"A professional man may claim as deductions the cost of supplies used by him in the practice of his profession, expenses paid in the operation and repair of an automobile used in making professional calls, dues to professional societies and subscriptions to professional journals, the rent paid for office rooms, the expense of the fuel, light, water, telephone, etc., used in such offices, and the hire of office assistants. Amounts currently expended for books, furniture and professional instruments and equipment, the useful life of which is short, may be deducted."

Depreciation at the rate of 5 percent a year may be deducted on permanent fixtures or apparatus which are in use, and apparatus which becomes obsolete may be charged off.

Under Section 234 (A) 7, it is stated:

"A reasonable allowance for the exhaustion, wear and tear of property used in trade or business, including a reasonable amount for obsolescence."

Article 178, Regulations 333 Revised, provides:

"Amounts representing losses on account of obsolescence of physical property may be included as a deduction from gross income, as a loss, provided such amounts have been

recorded in the books, following the condemnation and withdrawal from use of such property."

Traveling expenses for professional purposes may be deducted, but expenses of attending medical meetings are not held to be deductible under Treasury Decision 369, reading as follows:

"Amounts expended by physicians for railroad and Pullman fares and hotel bills, in attending a medical convention are not ordinary and necessary expenses incurred in the pursuit of his profession, and do not constitute allowable deductions in his return."

Premiums paid for liability insurance against malpractice suits are deductible items.

Taxes are deductible except special assessments which may increase the value of the property owned. In this connection, Section 214 (a) of the Revenue Act of 1917 provides: (3) "Taxes paid or accrued within the taxable year imposed; (c) by the authority of any State or Territory, or any county, school district, municipality, or other taxing subdivision of any State or Territory, not including those assessed against local benefits of a kind tending to increase the value of the property assessed, may be deducted."

Article 133 of Regulations 45 (1920 Edition) provides that:

"Taxes paid for local benefits, such as street, sidewalk, and other like improvements, imposed because of and measured by some benefit inuring directly to the property against which the assessment is levied, do not constitute an allowable deduction from gross income. A tax is considered assessed against local benefits when the property subject to the tax is limited to property benefitted. Special assessments are not deductible, even though an incidental benefit may inure to the public welfare."

Loss from the sale of securities is a deductible item, as are, also, charitable donations up to 15 percent of the net income.

With reference to charitable contributions, Article 251 has this to say:

"Contributions or gifts within the taxable year are deductible to an aggregate amount not in excess of 15 percent of the taxpayer's net income, including such payments, if made to or for the use of: (a) The United States, the District of Columbia, or any State or Territory, or political subdivision thereof, for exclusively public purposes; (b) any corporation or community chest, fund, or foundation, organized and operated exclusively for religious, charitable, scientific, literary, or edu-

cational purposes or for the prevention of cruelty to children or animals, no part of the net earnings of which inures to the benefit of any private stockholder or individual; or, (c) the special fund for vocational rehabilitation under the Vocational Rehabilitation Act of June 27, 1918. For a discussion of what corporations and organizations are included within (b) see Article 517. Deduction of contributions to posts of the American Legion or the women's auxiliary units thereof is expressly allowed by the statute."

Bad debts are deductible items. Under Treasury Decision 3262:

"Debts ascertained to be worthless and charged off within the taxable year (or in the discretion of the Commissioner, a reasonable addition to reserve for bad debts) and when satisfied that a debt is recovered only in part, the Commissioner may allow such debt to be charged off in part."

Article 72, relating to Insurance, Compensation, and War Pensions, may be of interest to physicians:

"(a) Upon the death of an insured the proceeds of his life insurance policies, whether paid to his estate or to any beneficiary (individual, partnership, or corporation), directly or in trust, are excluded from the gross income of the beneficiary. (b) During his life only so much of the amount received by an insured under life endowment, or annuity contracts as represents a return, without interest, of premiums paid by him therefor is excluded from his gross income. (c) Whether he be alive or dead, the amounts received by an insured or his estate or other beneficiaries through accident or health insurance or under workmen's compensation acts as compensation for personal injuries or sickness are excluded from the gross income of the insured, his estate and other beneficiaries. Any damages recovered by suit or agreement on account of such injuries or sickness are similarly excluded from the gross income of the individual injured or sick, if living, or of his estate or other beneficiaries entitled to receive such damages, if dead. Since June 25, 1918, no assessment of any Federal tax may be made on any allotments, family allowances, compensation, or death or disability insurance payable under the War Risk Insurance Act of September 2, 1914, as amended, even though the benefit accrued before that date. In addition to this exemption from all Federal taxes, the Revenue Act of 1921 exempts from income tax amounts received as compensation, family allotments, and allow-

ances under the provisions of the War Risk Insurance and the Vocational Rehabilitation Acts, or as pensions from the United States for service of the beneficiary or another in the military or naval forces of the United States in time of war."

Article 73, on Gifts and Bequests, is also of interest:

"Money and real or personal property received as gifts, or received under a will or under statutes of descent and distribution, are exempt from tax, although the income therefrom derived from investment, sale, or otherwise is not."

There are many other regulations and decisions of interest to physicians who buy or sell real estate on deferred payment plan, and to physicians who are connected with stock companies and business corporations.

For further information and decision, see "Regulations 62 (1922 Edition) relating to the Income Tax under the Revenue Act of 1921," also, *Internal Revenue Bulletin*, January, 1922-June, 1922, Treasury Department, Bureau of Internal Revenue. These books may be obtained from the Government Printing Office, Washington, D. C.

AN ELECTRO- AND PHYSIO-THERAPEUTIC NUMBER

We are planning to issue an electro- and physio-therapeutic number in the June issue of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*. Such a special issue has been asked for repeatedly by our subscribers and we know that it is going to be a good one. We want those who have had practical experience in this form of treatment to communicate with us, being careful to submit their manuscripts not later than May 1st.

PROGRESS

A recent announcement in the medical press excites our curiosity and causes us to wonder.

The advertisement referred to is that of an importer of German dyes, who is also a manufacturer (in this country) of a well-known drug which has its origin in Germany. In his announcement of a certain widely used drug, this manufacturers refers to the fact that it is still made "in accordance with original formulas and processes."

Whatever respect is due to the originator of an idea, a formula, or a product, the same cannot be owing to those who continue to use original ideas when there is something

better available. Science has made great strides in the past ten years. Constant research is developing new ideas, is improving old methods and is profiting by the mistakes of the past. This truth is exemplified in everything we see about us.

You can recall the early types of horseless carriages and the rattle-traps of ten years ago. Compare these with the modern automobiles of today. Could any auto manufacturer be justified in advertising a car made after the "original processes" of the pioneers in this industry?

Compare the improvements in electric lighting, in surgical procedures and apparatus, in hospital equipment and in modern conveniences with the methods of fifteen or twenty years ago. Think of the advances in chemistry, in surgery, and in medicine!

We wonder why a present-day manufacturer will advertise that his products are made in accordance with "original formulas and processes," expecting to convince the medical profession that such products are equal to later drugs made by improved processes, the result of intensive research work.

"REVISED BEDSIDE DIRECTIONS"

Prof. Solomon Solis Cohen, who contributed to *CLINICAL MEDICINE* for January (p. 93) an article entitled "Revised Bedside Directions for the Treatment of the Acute Pneumococcus Pneumonias," informs us that there has been an error in the cuts published. Unfortunately, one of the cuts that should have been inserted in the paper had not been sent and, in its place, another had appeared.

This error will be corrected in the reprints of this instructive paper which are being made up now. Doctor Cohen will be glad to send copies of this reprint to physicians requesting him to do so, if they will enclose a two-cent stamp for postage. Doctor Cohen's address is 1906 Walnut St., Philadelphia, Pa.

The reprints will probably not be ready for another month. In the meanwhile, the chart can be found in an article entitled "The Complete Clinical Chart" which was published in the *New York Medical Journal* for January 6, 1918.

THE CARE OF SURGICAL PATIENTS

Among the topics on which articles have been requested by several subscribers, in the immediate past, is that of the care of surgical

patients: before, during and after operation. This is a subject that presents problems all its own, which frequently are overlooked, or the importance of which is not realized. Yet, it is a fact that the outcome of most operations and, certainly, the permanent results depend fully as much upon the ante- and post-operative care that patients receive as upon the manner in which the operation was performed.

We are happy to advise the readers of *CLINICAL MEDICINE* that our associate editor, Dr. Gustavus M. Blech, has in preparation a series of articles on this important subject. The first of these articles will appear in *CLINICAL MEDICINE* for April. The whole series will be reprinted, when complete, and will then be available in pamphlet form.

"IN RE: CONAN DOYLE AND THE SPIRITS"

A few months ago (this journal, July, 1922), Dr. Candler described his impression on hearing Dr. Conan Doyle's lecture on the spirit world, and outlined his individual reaction to these ideas. The article in question called forth several comments, mostly commendatory, of which we selected two for publication. One of them is clearly critical and disapprobatory of Dr. Candler's viewpoint.

The publication of these letters was delayed for various reasons. Still, we do not deem it too greatly *post festum* even now. There is just as much indulgence in unwholesome spirit chasing; just as much need for physicians to make up their minds about the problem; just as great a necessity that physicians should be able to discuss the matter with those of their patients and friends who want their opinion. In a way, the discussion is one of preventive mental hygiene. So, we do not apologize for publishing the two letters that will be found on page 220 and page 223 of this issue. Both are instructive in their way. Both make interesting reading. Both assist in forming our conclusions.

SEND IN YOUR SUBSCRIPTION

When the March issue of a monthly journal is out, it may be assumed that all subscriptions for the current year are entered and paid up. There are always a few laggards, some of whom are in that class without their volition: they have not had time, they have

forgotten, they have not had an opportunity to send in their subscription.

Whatever may be the facts, now is a good time to settle up and to make sure that you receive *CLINICAL MEDICINE* for the balance of the year. We have taken this much out of Mr. Coué's book, that we are determined to make *CLINICAL MEDICINE* better and better in every way, month by month, and year by year. We want your help, not only in money (which is mighty nice), but also in the shape of contributions, articles and letters and, finally, through your cooperation in talking to your friends and inviting subscriptions. About this, we refer you to another editorial in this issue.

TEN THOUSAND NEW SUBSCRIBERS

In view of the work which *CLINICAL MEDICINE* has set itself to do, and because of what it has succeeded in accomplishing in the years gone by and is actually doing now, we feel that *CLINICAL MEDICINE* is truly the general practitioner's journal. We do not exclude specialists, nor do we mean to say that we have nothing of interest for them. However, our sympathies are, first of all, with the general practitioner, with the man who does most of the work, who carries the hardest responsibility and who receives the least remuneration, the slightest consideration.

It is not only that we desire to help the general practitioner in his daily work; to provide information, to offer him stimulation and encouragement, to give him aid when he is puzzled. But, in addition to all this, we are anxious to do our share toward affording material for thought on more general lines that may not be strictly medical but still must interest the medical man.

However, our biggest fight for the immediate future will be in the earnest endeavor, as far as lies in us, to promote the welfare of medicine and of the medical profession. We can not blind ourselves to the fact that, in a way, the medical profession is being attacked viciously. Those of our adversaries who are least fitted and qualified to offer a substitute for our services create the biggest smoke screen and make the loudest noise. Needless to say, if a noise be only loud enough it will arouse attention.

With all the diverse irregular cults of healing to the fore and voicing their blatant assertions, as to what they are capable of doing, and also with the incredible mass of misin-

formation and poorly-digested knowledge prevailing, we are convinced that the medical profession no longer may remain silent; we hold that it is our duty to speak out, to inform the people of what actually has been accomplished through the direct agency of the medical profession, to show them to what extent they are indebted to physicians for improved conditions of living, regarding sanitation, hygiene, the lessened morbidity and mortality of numerous infectious diseases, regarding the fact that the average duration of life has almost doubled as compared with that prevailing about fifty or sixty years ago.

Our purpose can be accomplished in several ways. We, on our part, must largely content ourselves with providing for our readers the information that they require to meet the various accusations, recriminations and inexact claims of the irregulars. To some extent, we might even enter the popular press.

However, we wish to urge the general practitioners the country over to devote a portion of their time to the more general duty which we tacitly assume on entering the medical profession; namely, that of being teachers. Here and there we learn that some of our friends write for daily papers and for other popular publications. This should be more general and we hope that it will become so. Especially small-town newspapers should carry information on matters of health, prepared by their local physicians. If we can be of assistance to you in getting up such communications, we shall be happy to be at your service.

All this concerns a program that we have laid out and which we intend to follow to the best of our ability. For the purpose, we naturally want the cooperation of those in whose behalf we propose to fight. We want to extend our sphere of influence, to enlarge the circle of our readers. Most of our subscribers have been with us for many years. Most of them have been staunch friends.

What we want you to do, each one of you, is to talk *CLINICAL MEDICINE* to your medical friends and to invite subscribers. It should be easy to increase our subscription list by ten thousand during the present year.

If you read *CLINICAL MEDICINE* with interest, if you receive help for your daily work from the suggestions contained in it, and stimulation and encouragement—is it not fair to your doctor friends to call their attention to the Journal which represents the general practitioners of the country and which does

its level best to help them in every way possible? Suggest to them that they subscribe. We venture to think that they will thank you.

If you contribute articles or even only letters which are printed in the reading pages of *CLINICAL MEDICINE*, you may send us a list of your friends to whom the copies are sent in which your communications appear. These will serve as sample copies. They will be read with interest for the personal reason that your own papers are printed there. We hope, of course, that your friends will like the *Journal* so much that they will subscribe for it.

Thus, then, if you like *CLINICAL MEDICINE*, if you want to do your part in making our work possible, get busy and procure those new subscribers for us. The more subscribers *CLINICAL MEDICINE* has, the more powerful a force it will be. And, don't you see that, at the present time, when the medical profession is beset by enemies on all sides more than ever before, it is absolutely necessary for a strong force, a vigorous voice to be felt and heard, to protect the interests of physicians and thereby the interests of the people. Make no mistake, and do not permit the people to make a mistake! The interests of the medical profession are intimately bound up with those of the people at large. What benefits physicians as a class will benefit the public.

GET SUBSCRIBERS AND DOLLARS

In another editorial, we invite the cooperation of our subscribers and friends to further our efforts to increase the subscription list of *CLINICAL MEDICINE* and thereby to enable us the better to accomplish the constructive program that we have outlined and upon which we have started.

Realizing that money talks and that it will make any proposition more interesting in every way, we have this offer to make. For every paid-up subscription that you send in, with your check, your own subscription will be credited with \$1.00. If you are fully paid up for the current year, you have the option to have your subscription extended or to receive \$1.00 in cash.

It seems to us that this is a good offer. If you will ask, say, ten of your doctor friends to subscribe and if you will procure their subscription, a ten-dollar bill will buy a mighty nice new hat for you, or it will do several other things that you have been wanting for long.

Now, then, if you like *CLINICAL MEDICINE*, and if you want to do your part in making our work possible, get busy and procure those new subscribers for us. Your commission, we believe, should make it worth your while. Your help in the work we want to accomplish is needed. We have no fear of losing subscribers after they have once received *The Journal* for the space of a year. We are confident that they will stick even as you have been sticking. Will you help?

MONSIEUR COUÉ

We wonder how the omission of any mention of Coué, in *CLINICAL MEDICINE*, would be explained. Would it be taken as a deliberate ignoring of this interesting little Frenchman; as a contemptuous passing him by; would it be explained as careless neglect, or as a fear to tackle a subject that is not quite easy or simple? At any rate, we do not feel that any medical journal need ignore Coué or that it would be complete without taking account of Couéism.

Coué's optimistic and encouraging stimulation of the subconscious is, of course, nothing new. As we have read in numerous communications, it all has been done before. Nevertheless, the man merits approbation for having insisted on this wholesome philosophy at a time when the world, and especially his own country, is engulfed in pessimistic apprehensions of coming misfortune. The French are impressionable, their sympathies are readily enlisted and, yet, (an apparent contradiction), their scholars are among the most critical and the most difficult to convince. We may assume that Coué's rise to popularity in his home land is due to the fact that times and circumstances were favorable, that his message came at a psychological moment.

His popularity in our own country is by no means cause for surprise, either. No doubt, his philosophy is attractive; it is human; it appeals to the imagination. That expression, we realize, may be open to criticism. It is not intended to convey the idea that Coué is successful only in healing people who have nothing the matter with them, or who are afflicted with imaginary maladies. Still, supposing it were so. What then? As a great French clinician once said, a man who imagines himself ill is ill. Even if only his imagination is diseased, he is diseased. He needs help. If the mental help, the stimulation of his mind, the encouragement of the morale is sufficient, all the better. The point is, that the man improves men-

tally and physically; for, mind you, any mental irregularity or deterioration will cause corresponding physical malfunction.

Mr. Coué has the good taste and the honesty not to attack the medical profession and he is wise in refraining from doing so. Indeed, it strikes us (this is the writer's personal opinion) that it would be quite feasible to work with him or to employ his methods as a pleasing variation of the same principles that we have utilized for centuries.

The stimulating phase in Coué's methods lies in his optimism, in his cheery encouragement, in his appeal to faith in our inherent powers. These powers naturally are great and are not always called into play or, better, put to work sufficiently. We believe that Couéism means, in the end, courage, optimism, confidence, and that it accomplishes much in overcoming many ills that we are tempted to pooh-pooh and from which the patients, nevertheless, often suffer cruelly.

Incidentally, we like Mr. Coué's picture. He is not only an optimist, but we are sure, he has a keen sense of humor. He is not a fanatic. He doesn't deal with ideas or ill-digested alleged theories. He deals with what he has found to be facts. He is convinced of their truth and he bases his advice, his encouragement, his influence upon them. We might all take a leaf from Mr. Coué's book. It would help in many instances.

POPULAR EDUCATION IN MEDICAL MATTERS

We are informed that the McDonough County Medical Society (Illinois) decided to ask all its members to contribute articles on medical subjects of interest to the laity for publication in the lay press. Physicians may write on any subjects of their own choosing but, without advertising themselves. They may not offer adverse criticism; they may not mention irregular cults. The articles must be written in popular language and must contain between one and two thousand words.

At the St. Louis Meeting of the American Medical Association (1922), resolutions were passed to proceed upon an educational campaign for telling the public what medicine has done and is doing now for humanity.

Several of the state societies, we understand, have pursued a similar course. At its meeting in June, 1922, the Illinois State Medical Society passed a resolution to the effect that the House of Delegates of the Illinois State Medical Society go on record as endorsing a broad plan

of publicity through pamphlets, addresses and the lay press, any or all, to the end that the public be enlightened on the truths and principles contained in the development, progress and present status of medicine in order to counteract the advertising propaganda of the many sects that claim superiority in methods of healing over those of established medical practice.

The Council of the State Society, at its September meeting, gave the matter thorough consideration to the end of carrying out the recommendations of the House of Delegates. A committee was appointed to execute the instruction of the Council in devising ways and means to educate the public to the dangers of medical practice by the untrained and uneducated. This committee was instructed to prepare and to supervise material that is to be printed in daily and weekly hometown newspapers, both English and foreign-language periodicals, throughout the state.

These articles will open the eyes of the people as to the progress of medical science and the consecration of the profession to humanity's welfare. *Their Contents Will Impress Specifically Upon the Public That a Sick Man Needs a Doctor And Not a Mountebank!* This propaganda for the lay press will be handled by reliable organizations, skilled in approved methods for securing results from educational publicity.

All this means a move in a direction that should long since have been followed. It is a truism that popular education in matters medical would help to improve the people's health and would arouse in them an intelligent interest in health matters which now they can not be said to possess. Popular views concerning health and ill health and concerning methods to restore health are often sadly twisted and would be laughable if the matter were not so serious.

There is one difficulty in the way of carrying out this campaign, and that is, the inability of most physicians to write in such a way as to arouse the layman's curiosity and desire to read. We, all of us, should benefit from studying the methods and the technic of newspaper men. These latter have discovered the way to reach the popular mind. Their writing is "different," somehow. It arouses interest. It stimulates the wanting to know and, yet, if you examine it closely, it is rarely brilliant. Nevertheless, newspaper writers usually get their message over.

Now, why can not we doctors learn to write in the same way? The people must know; they want to know. If we do not tell them facts, they will accept assertions made by those

who do not know but pretend to know. Every physician can learn to write simply, concisely and clearly. After all, if we can instruct our patients by word of mouth without using technical terms, we can do the same on paper. It may pay us, all of us, especially physicians in the country and in small towns, to get in touch with the press and to write brief but frequent articles on topics of general interest. Many of our friends are doing it. Many more should do it.

Let us make this campaign for popular education and information a general one. The people will soon awaken to the fact that, after all, physicians are their real friends and that they are their proper advisors in matters of health, hygiene and sanitation.

IS THE FAMILY DOCTOR PASSING?

In a letter recently received, a correspondent said: "I hope that the general practitioner is not doomed, although, sometimes, it looks as though his days were numbered, because of specialism."

There is a lot of calamity talk about the passing of the family physician. It strikes us that the family physician is less of an institution than formerly, not because there is less need of him (he is needed just as much) but because the material out of which they used to make family doctors is no longer available or available only in small supplies. Students in medical colleges are spoiled for family physicians and, to some extent, even for general practitioners. We have made a fetish of "scientific" work. We have stressed the laboratory investigation of patients too much and have neglected their clinical study, the bedside observations which enabled men like Hippocrates, Sydenham, Loomis, Austin Flint, even Osler to become great. We say, *even* Osler because, in some respects, Osler, too, was overly influenced by laboratory tests and suffered from an excessively critical attitude. For that reason, he denied so much. Still, it must be granted that the positive in him overbalanced the negative and we would by no means detract from his just claim to greatness as a clinician.

If more of our young men could feel the "call," the impulse, the urge to settle down as practitioners of medicine, to care for and heal sick people as individuals rather than as cases, the family physician, the general practitioner, would soon be restored to his rightful, important position. The confidence of the public must be earned. It can not be claimed

without being merited. How many of the men in middle life or in early middle life (say, of those who are ten years out of college) do you know whom you would consider as fit to be "family doctors" of the kind that Ian MacLaren has depicted so beautifully? There are mighty few. They don't seem to grow them that way any more. And, yet, how much good those men did accomplish! They may not have treated their "cases" quite according to Hoyle, but they treated their sick people and they benefited the sick souls of the latter.

As Nascher says, human nature has not changed in the last forty years. Then why, in the name of all that is reasonable, can human nature not be served as well as it was forty years ago, plus the advantages of the progress made—providing that we have men who can give the service that is needed?

THE TECHNIC OF HYPODERMIC INJECTIONS

In our opinion, hypodermic injections should always be either endermic or intramuscular. If this expression is Irish and contains a contradiction, make the most of it.

The idea is this: A hypodermic injection, that is, the introduction of a quantity of solution into the areolar tissue below the skin, produces a swelling which often is painful and is absorbed but very slowly. Since the purpose of such an injection is, to introduce a remedy for rapid absorption into the circulation, the end is defeated, in a measure, which is one serious disadvantage. Another point is, that the pinching of the skin and the introduction of the needle cause more pain than is necessary. It seems to us that hypodermic, or subcutaneous, injections could be done away with altogether.

Endermic, or intradermic, injections are painful, to be sure; nevertheless, they are unavoidable at times, being required for diagnostic purposes. They have a scant therapeutic value, for the reason that has been mentioned in connection with hypodermic injections. Absorption is relatively slow and, therefore, the effect is delayed.

For therapeutic effect, we are convinced that the best method of injecting remedial agents parenterally is, by intramuscular injection. Not only is the technic much simpler but, in addition, absorption takes place very promptly. There is little or no swelling, the pain is relatively slight, and there is only a mild discomfort, hardly amounting to sore-

ness, persisting for a portion of a day after the injection.

Very occasionally, and only in exceptional cases, it happens that even intramuscular injections are quite painful and are followed by marked swelling and reactive inflammation. That, though, is the exception. In most cases, such accidents do not happen.

Of course, it is necessary to differentiate between bacterins (bacterial vaccines) and other therapeutic injections, such as preparations of iron, arsenic and other remedies. In the case of bacterins, we expect a reaction which is not only general (systemic) but also local and, if the patient is forewarned, there will be little objection. In fact, patients soon come to look for the reaction and fear that they do not get the full benefit of the treatment if the injection of a vaccine is not followed by swelling and soreness of the arm.

The circumstance that absorption proceeds promptly after intramuscular injection makes it possible to do away with intravenous injections. In fact, we remember several opinions to this effect being voiced by clinicians of note. While it must be admitted that the intravenous injection is the most rapid way to assure prompt introduction of a remedial agent into the blood stream, it can not be denied that there is always a certain element of danger connected with this method. Some people seem to be peculiarly susceptible to the slightest interference with the blood stream. Fainting, even collapse are observed occasionally. Moreover, it must not be forgotten that, at the seat of injection, a slight healing thrombosis occurs from which (in extremely rare instances) embolism has followed.

Such accidents, have, to our knowledge never attended intramuscular injections. These latter seem to us to be not only the least painful but also the most certain to produce results and certainly the least dangerous.

Years ago, when the present writer was in college, he was taught to hold the hypodermic syringe as one holds a pencil. This, we maintain, is an exceedingly faulty way of doing things. It is very difficult to manage the hypodermic syringe firmly and confidently. It is impossible to introduce the needle without producing much pain and, very frequently, the patient becomes disgusted with the "fiddling around" that the doctor indulges in.

When giving a hypodermic or, more correctly, an intramuscular injection, the needle should be held as the surgeon holds the knife,

or as the cobbler holds the awl. That enables the doctor or nurse to guide the needle, to thrust it firmly and promptly into the tissues with the least possible amount of pain. Providing that the needle be small enough and that it be kept scrupulously sharp, the pain attending the little operation is negligible. It happens very frequently that our patients ask when we are going to give them the injection—when the syringe is already put away and the operation is all completed.

We have found the best way of giving an injection, to bunch a portion of the muscle of the triceps on the back of the upper arm, holding it with moderate firmness between thumb and index finger of the left hand. The loaded hypodermic syringe, provided with a sharp needle, is held in the right hand and plunged almost vertically into the muscle with a quick thrust. The patient will hardly ever flinch, showing that the pain is slight, if it is felt at all. Then the plunger is driven home with moderate force, the needle is removed and the place of injection is manipulated gently in order to prevent accumulation of the liquid in one spot. The better it is distributed, the more promptly absorption will occur.

As long as the skin of the arm and the hypodermic needle, as well as (*nota bene!*) the hands of the physician are clean, no antiseptic incantations are required. We do not bother with dabbing a little iodine on the skin, for the reason that this could not possibly destroy any germs that happen to be residing there, in the few seconds intervening between the application and the injection. The only precaution we do take is, to have skin, syringe and our hands clean. In the course of many thousand intramuscular injections that we have given, we have never seen the slightest evidence of "stich"-infection.

An injection of this sort can be made a torture and it can be made an extremely simple thing, according to the confidence that the operator has in his technic, according to the confidence and assurance that he manifests. If he fusses around, he will get his patients nervous. A calm operator will quiet the patient's apprehensions and even fussy patients will accept our treatments without contradiction and without fear—after the first experience which invariably reassures them.

It is quite a little art to give a proper injection. We know some doctors whom we should not trust, ourselves. We know others to whom we go unhesitatingly when we are in need of that sort of treatment.

Leading Articles

Surgery of the Thyroid*

By THOMAS A. CARTER, Chicago, Illinois

VERY little is known regarding the etiology of the different types of enlargement which occur in the thyroid, except that there are some drinking waters whose use results in the development of goiter in a more or less marked proportion of those who drink it constantly. Some authorities believe that certain types of enlargement are purely symptomatic, so to speak, and that the basis or origin of the trouble is in the cardiovascular or nervous system. Although this may be true, there is a different syndrome accompanying the different kinds of goiter. Furthermore, these symptoms will subside after the condition of the thyroid has been remedied.

The surgical treatment of cysts, adenomas, and colloid enlargements of the thyroid has been practised for a great many years, especially in Switzerland, where such conditions are very common. Only comparatively recently have operations been performed for the relief of toxic symptoms produced by thyroid changes.

Basedow, in 1840, first thoroughly described cases of exophthalmic goiter. By far the most important work in the development of surgery of exophthalmic and thyrotoxic goiters has been done by Ochsner, the Mayos, and Crile. Even now, operative results are not perfect; yet, the progress made in surgery of the thyroid in this country during the past fifteen or twenty years is certainly one of the most important advancements made in surgery during that period of time.

It is now generally conceded that most forms of toxic or exophthalmic goiter require surgical treatment for permanent relief. However, there are some forms, such as the so-called adolescent goiter, that respond to medical treatment and, often, some of the milder toxic types may be relieved without operative interference.

I shall not attempt in this paper to cover all the phases of treatment for thyroid lesions, but to present more especially a classification of these cases.

Four Groups of Goiter Cases.

Enlargements of the thyroid fall into four distinct groups based upon the clinical features and the pathological changes in the gland:

Colloid Goiter

Group 1.—Colloid goiter is definitely a goiter of youth and is probably seldom seen in persons more than 35 years of age, most frequently occurring between the ages of 15 and 25. In this group are included many of the so-called adolescent goiters, the type which usually produces the uniform fullness of the neck so often seen in young women. Such types are not infrequently associated with nervous symptoms and menstrual disturbances. There may also be tachycardia, rendering the differentiation of exophthalmic goiter quite difficult, especially if it is of the vasomotor type with thrills and bruits.

The basal metabolic rate is, however, normal or slightly lower than normal, never increased. This type of goiter is recognized by the symmetric enlargement of both lobes and the isthmus of thyroid which it produces, and by the characteristic soft, granular feel it imparts to the palpating fingers. In many instances, it may produce no symptoms except slight nervousness or worry over the knowledge of the fact that it exists.

Microscopically, colloid goiter differs from normal thyroid tissue in that the acini are dilated and filled with colloid material while the epithelium lining the acini is low and flat in appearance.

Colloid goiter is the only type of goiter which disappears under administration of iodine, thyroxin, etc., and should not be considered a surgical condition. Its failure to

*Read before the Lake County Medical Society, November 23, 1922.

disappear under the administration of these agents probably indicates that it is not a simple colloid goiter but one of the mixed types often seen, in which a colloid goiter is associated with small adenomatous growths of the thyroid. Thus, a simple colloid goiter may later develop into adenomatous enlargements and produce slow pressure symptoms and evidences of intoxication. The simple adolescent goiter should be given an opportunity to subside under proper management and, if it does not disappear after puberty, a careful differential diagnosis should be made and operative treatment advised.

Adenomatous Goiter

Group 2.—Adenomatous goiter is the most common type. The characteristic symptom in the cases of this group is pressure. The enlargement is due to the presence of the adenoma. The enlargement may be present for some time before symptoms arise. These symptoms are usually choking, shortness of breath, and a sense of pressure. The tumor may increase in size until there is a marked deformity of the trachea and larynx, and perhaps, but very rarely, a paralysis of the recurrent laryngeal nerve.

Although this type often seemingly develops in persons of middle age, the probabilities are that its true origin in such persons dates back to early life, as by far the greater number of patients give a history of having first noticed the enlargement of the thyroid at some time between the ages of 15 and 20.

The enlargement of the thyroid is produced by the growth, within the substance of the thyroid gland, of encapsulated adenomas which probably have developed from fetal rests. These growths of adenoma begin in early life and they may increase in size either slowly or rapidly. At times they produce an enormous enlargement of the thyroid gland, and most of the larger goiters are of this type.

Degenerative changes are prone to occur, usually through hemorrhages within the capsule of the adenoma, and, according to the degenerative change which predominates, the various clinical varieties of goiter, such as hemorrhagic, cystic and calcareous, have received their names. There is not infrequently a decrease in the secretory activity of the gland, producing a condition of *hypothyroidism* with a lowered basal metabolic rate. This condition does not always remain non-toxic, for about 25 percent are found to be suffering from *hyperthyroidism*. But the

symptoms of hyperthyroidism usually do not develop until the goiter has been present for some years (15 or 20). The hyperthyroidism which we find associated with adenoma produces a clinical picture different from that seen in exophthalmic goiter. The two conditions are often confused.

Adenomatous goiters seldom produce toxic symptoms in persons under 30. When toxic symptoms develop, the metabolic rate is found to be increased, although it is not so high as the rate in cases of exophthalmic goiter. The body is differently affected by long-continued mild hyperthyroidism in this disease and by the rapidly increasing, severe hyperthyroidism of exophthalmic goiter; in the former, the cardiovascular system suffers more severely, while in the exophthalmic goiter the nervous system is more profoundly affected. Often the condition goes unrecognized until the symptoms of myocardial degeneration occur and the patient begins to suffer from palpitation, arrhythmia, and (later) dyspnea and edema. Unless the myocardial changes are very marked, the condition is almost always associated with increased blood pressure. Other symptoms of hyperthyroidism, such as tremor, flushed moist skin, tachycardia, and loss of weight and strength, are present.

Clinically, adenomatous goiter may be recognized by the irregular type of growth which it produces—the thyroid is asymmetrically enlarged and a single or many rounded tumors may be felt on palpation. These tumors may be cystic, soft, hard, or even stone-like on palpation, according to the degenerative changes that have occurred.

Microscopically, areas of encapsulated adenomatous tissue are found scattered throughout the thyroid gland. The acini in these adenomatous areas may be of fetal type or they may resemble the acini in the fully developed thyroid when they often contain large amounts of colloid material. Up to the present time, it has been impossible for pathologists to note definite changes in either the thyroid tissue or the adenomatous tissue in toxic adenomatous goiters by which a diagnosis of hyperthyroidism can be made.

Adenomatous goiters are, in the majority of instances, best treated by surgical measures; but, in advising operation, certain factors should be taken into consideration. Since it is known that these goiters do not produce toxic symptoms at the time of life when they usually develop, and that the thyroid gland at that particular time of life is very

essential, it seems best to defer operation in young persons. Moreover, these growths usually involve both lobes of the gland and, when young persons are operated on, it is quite likely that small adenomas that cannot be palpated will be left, even after the thyroid is exposed, increasing the chance for recurrence of the goiter.

For these reasons, we usually recommend that small adenomatous goiters in young persons be not treated surgically until the age of 25 or over, excepting in instances where the goiter has increased in size and causes considerable pressure or deformity. In a healthy person at this age, a thyroidectomy may be done with such an extremely small risk that it seems better to advise operation than to allow the goiter to remain.

These patients frequently say that they are not inconvenienced by the enlargement at all, and they are rather inclined to put off surgical treatment. I believe it is much better to remove the adenoma before any nervous or toxic symptoms develop, as more of the danger in these operations results from the condition of the patient at the time of the operation itself.

Exophthalmic Goiter

Group 3.—Exophthalmic goiter may occur at any age, but is probably most often seen in the third and fourth decades of life. In many instances, the condition develops suddenly, with rapid increase in the severity of symptoms. In some patients, though, its onset is insidious and severe symptoms do not develop until the second six months of the disease, at which time the patient often passes through a period of severe toxemia in which all the classic symptoms of exophthalmic goiter are present. This period is termed a "thyroid crisis." It is very important never to operate when patients are in this acute condition.

The goiters of this group may be divided into two distinct types. One is comprised of the hyperplastic thyroids producing the symptoms of exophthalmic goiter; the other is characterized by the toxic degenerating adenomatous thyroid producing what Kocher calls "the goiter heart." Although these two types differ in many respects, it is entirely possible that the symptoms are produced by the same agent, or toxin. An exophthalmic goiter is a definitely hyperplastic thyroid. Hyperplasia is usually present throughout the entire gland. Although a small part of the thyroid may appear to be nearly normal, areas of hyper-

plasia exist on other portions of it. Usually there is a general enlargement of the gland, although, sometimes, the most severe symptoms are noted when the gland is barely palpable. Occasionally the gland is not only hyperplastic but contains adenomas. This type of thyroid is usually firm, hard, and very vascular; on palpation, the gland in nearly all instances will be found to be symmetrically enlarged and quite hard. Microscopically, the epithelium lining the acini is found to have undergone the hypertrophic changes which are characteristic of this disease. Except in the late stages, very little colloid material is found in the acini.

Clinically, the condition may be recognized by the presence of such symptoms as nervousness, tachycardia, tremor, flushed moist skin, and loss of weight and strength beginning shortly after the onset of hyperthyroidism, and an increased metabolic rate.

The best results in the treatment of exophthalmic goiter are obtained through surgery. It cannot be denied that certain patients improve and apparently recover under medical treatment. In the beginning of the disease, however, it is impossible to distinguish between the patients who may fall in this group and those who are destined to suffer severe damage as the disease progresses. Great responsibility is assumed, therefore, by advising medical treatment in early cases in which thyroidectomy might prevent development of the severe conditions, and, in many instances, the death of patients who would fail to improve under medical treatment.

The mortality following surgical procedures in this disease has gradually decreased until it is possible, by present-day methods, to operate in a large number of consecutive cases of exophthalmic goiter without a death.

Malignant Goiter

Group 4.—Malignant goiters. The basis of a clinical diagnosis of malignancy of the thyroid is usually the hardness of the tumor. Often the tumor of the thyroid is very small in the early stages and difficult to diagnose, except histologically, until the growth has extended into the surrounding tissues and involves the recurrent laryngeal nerve, frequently producing a total loss of the voice. When the cartilaginous rings of the trachea become infiltrated, there is great difficulty in breathing, at least more marked than seen in benign cases.

Fortunately, sarcoma and carcinoma of the thyroid are very rare and seldom recognized.

until pathologic sections are made; operative procedure in this class of cases is very unsatisfactory and they are best treated with radium and x-ray.

Features of the Technic

A great deal has been said regarding the anesthetic which should be employed and many different views have been expressed. Dr. A. J. Ochsner, of the Augustana Hospital, has, for many years, used to good advantage a combination anesthetic consisting of morphine, gr. $\frac{1}{4}$, and atropine, gr. $\frac{1}{150}$, administered one hour and a half prior to the time for operation; and morphine, gr. $\frac{1}{6}$, and atropine, gr. $\frac{1}{200}$, one-half hour before operation. This is given hypodermically. At the time of operation, the line of incision is injected with a small amount of $\frac{1}{4}$ -percent procaine. The operation then may begin, ether seldom being necessary. Where a combination of the above is used with ether, the patient is anesthetized very slowly but very thoroughly and the head of the table elevated when anesthesia is complete.

The actual technic of thyroid surgery is more difficult than that of surgery in any other region. Experience and continual improvements in technic have helped in the control of the blood vessels during thyroidectomy. In the hyperplastic thyroid, all the superficial vessels are dilated; there is oozing from all the smaller vessels, and bleeding is hard to control. But, the most serious difficulty arises from the slipping of the inferior thyroid vessels backward beneath the cervical fascia. If this occurs, dissection should be made under the fascia and the vessels be ligated. If the vessels are not tied, bleeding may continue under the fascia into the mediastinum and prove serious, if not fatal. In thyroidectomy, even the smallest vessels should be carefully ligated. The slightest oozing afterward may produce a clot, causing tracheal pressure and difficulty in breathing. It is best to apply forceps to the tissues step by step and to cut between the forceps.

Injury to the trachea or parathyroids and a possible tracheal collapse during the operation can best be avoided by preserving the fascia about the trachea and larynx and possibly leaving some thyroid tissue over the cartilage. When this is done, the postoperative convalescence is much easier, coughing and irritation less, and the accumulation of mucus in

the trachea and larynx greatly diminished. This I consider a very important factor in the technic of thyroidectomy. The posterior capsule of the thyroid and a layer of thyroid tissue should always be left in place.

Injury to the recurrent laryngeal nerve, though not common, is most exasperating. It is important to note the condition of the vocal cords, voice, etc., before operation; for, there may be some degree of paralysis of which the patient is unaware. The loss of voice following thyroidectomy may also be due to grasping the recurrent laryngeal nerve in the hemostat or may be caused by a change in the position of the larynx and trachea resulting from the removal of the thyroid.

Amount of Thyroid to Be Left

There has been considerable discussion as to the amount of thyroid which should be removed. Extirpation of the entire gland will result in serious changes from the loss of thyroid secretion. On the other hand, if a sufficient quantity is not removed, there will be a recurrence of the symptoms. However, experimental work on animals shows that, if a very small piece of thyroid tissue is retained with its circulation and nerve supply, myxedema will not develop. By preserving more of the posterior capsule, we avoid injury to the parathyroids; and it is to be kept in mind that temporary tetany may result from trauma even of the parathyroids.

The results obtained following thyroidectomy depend largely on the condition of the patient at the time of operation and on the extent of damage to the vital organs at the time of operation, the best results being obtained in patients operated on early in the course of the disease, before severe damage to the organs has occurred. Patients should never be operated on during an acute exacerbation of the hyperthyroidism. If the damage to the circulatory organs, especially, has been extensive, it is impossible to restore the patient to normal health; for, true organic damage cannot be repaired. The operation, however, usually stops the hyperthyroidism and great improvement follows.

In conclusion, it may be said that, at the present time, the surgical treatment of lesions of the thyroid rests on a definite clinical and pathologic basis, and that the results more than justify this method of procedure. Most excellent results are constantly being obtained by the removal of the goiters producing toxic symptoms.

Butyn—A New Local Anesthetic

A Summary of about 500 Cases

By R. ALLEN GRIFFITH, Chicago, Illinois

IN March, 1921, I was requested to conduct a series of clinical trials with a new local anesthetic, butyn (para aminobenzoyl gamma di-n-butyl-amino-propanol sulphate), in infiltration anesthesia. I was conducting a clinic in prophylaxis and oral surgery, at the time, and had much clinical material to choose from.

Clinical Experiments a Relative Guide Only

Having no clinical experience to use as a guide, I studied the reports of the animal experiments that had been carried on by the physiologic investigators; realizing, however, that, while such experiments are useful as a guide to our clinical work, the safety in dental use of anesthetics of this character cannot be judged by the comparative toxicity on lower animals.

Each anesthetic of this class seems to have a "selective toxicity." Injected subcutaneously, cocaine, for instance, is approximately seven times as toxic on cats, and approximately eight times as toxic on dogs as on rats. Butyn, on the other hand, is twice as toxic as cocaine on rats, but on cats and dogs it is less toxic.

It is of interest to note that, when a dog is given a high sublethal dose of cocaine, it is sometimes 24 to 48 hours before it completely recovers. If given a large sublethal dose of butyn, it usually totally recovers in an hour or two and apparently feels as well as ever; due, no doubt, to the rapid elimination of butyn.

Selection of Patients

From these considerations, we decided that it was safe to use butyn on a human being. So, we chose a strong, healthy specimen—a policeman (their business is, taking unknown chances, anyhow), the operation being the surgical removal of a tooth with a large granuloma at the apex.

The pulse and blood pressure were found to be perfectly normal and the sphygmomanometer was left in position during the operation, the blood pressure being taken once during the operation and again at its completion. A constant check was kept on the pulse and, at no time, was there the slightest change in either blood pressure, pulse, or color. Time of operation, one-half hour.

No adrenalin (epinephrine) was used in connection with butyn in any of the earlier cases, because we wanted to be able to note any physiologic effects of butyn uncomplicated by other agents.

We chose decidedly phlegmatic patients for the first experiments, but, later decided to try the drug on some of highly neurotic temperament. As any disturbance in this class of patients is mostly psychic, we allowed them to sit to one side of the clinic room where they could see us working on patients but not see the operation. As these patients smilingly left the operating chair and assured us that "it did not hurt a bit," the neurotic patients were reassured and in no case in the clinic did we have a patient show more than a slight paleness, due to fright.

I have now been using butyn exclusively in clinics and in my private practice since March, 1921, and have used it in several hundred operations, a few of them having taken from one to two hours of time. All of my operations have been done under infiltration anesthesia, usually 2 percent, although I have found 1 percent sufficient in many cases.

A Few Unusual Cases

During this time, I have had just three extraordinary cases. One of these was in a trained nurse with a neurotic temperament who complained of a cocaine idiosyncrasy. Believing her trouble to be purely psychic, I explained butyn and the results of my experience with its use to her. Immediately after a small amount had been injected, she turned pale and fainted. Respiration almost stopped, the pulse was rapid and irregular. We worked with her for two hours before she was able to leave the office, and the teeth were not extracted. My faith in butyn was such, however, that I decided to try it again, as I believe her trouble to be entirely psychic and not due to any toxic action of the drug.

Two weeks later, I induced her to try again. I had my assistant prepare a solution of butyn in the laboratory, while I prepared a Ringer solution before her, not telling her what it was. I had no sooner started the injection of the Ringer solution than she started her performance just as before. When she came out of the first faint, I shook her roughly and showed her the tube of Ringer tablets, telling her that her trouble was all foolishness and that I intended injecting a little more of the Ringer solution, explaining to her that the infiltration of a physiological saline solution would sometimes produce anesthesia as well as an anesthetic. All this time, I held the hypo-

dermic in front of her. As I put the fingers of my left hand in her mouth to finish the injection, I dropped my right hand behind me for an instant, my assistant changing hypodermics instantly. The injection of butyn was made and the teeth extracted with no further trouble. Since then, I have twice operated on her, using butyn, with no sign of any reaction.

The second case was entirely different. My assistant injected 3 Cc. of a 2-percent solution of butyn and the patient still complained of pain, even to the prick of the needle. I concluded that we had possibly found a patient who was immune to anesthesia from butyn, so I prepared a 2-percent solution of cocaine and injected 3 Cc. of that. She still complained of pain when the tooth was touched; so it was extracted with gas.

The third case was that of a man. Before the injection was completed, he turned pale, the pulse became rapid and irregular. But, before he fainted, I gave him 2 ounces of whisky. For a few minutes, the pulse was so rapid and irregular that it could not be counted; however, it soon returned to normal, the injection was completed and the operation performed with no signs of further reaction. He stated that he always had the same experience even if he cut his finger.

My conclusion in all of these cases is, that the reactions were due entirely to psychic disturbances and not to the effect of the drug.

Right here, I would like to state that whisky is just as indispensable in the dental office as is the dental engine. Almost every dentist uses local anesthetics and there is nothing so necessary in case of reactions and shock as whisky. Strychnine, nitroglycerine, camphor or heroin injected subcutaneously are unpleasant to the patient; do not give as quick and satisfactory results; besides, the hypodermic syringe and solutions are never ready. Yet, the dentist must beg a prescription of some friendly physician or patronize a boot-legger. In other words, he must break the law in order, perhaps, to save a life.

Conclusions as to Butyn

My clinical experience with local anesthetics, cocaine, novocaine and butyn, extends over a period of 22 years. I have used all of them in various concentrations for all types of dental operations, and have reached the following conclusions in regard to butyn.

1.—Butyn is fully as rapid in its action as cocaine and far more rapid than procaine. I start to operate the moment the injection is finished.

2.—Butyn produces an extremely intense and deep anesthesia.

3.—Butyn seems to be far more powerful than procaine and lasts longer. It lasts still longer if combined with just sufficient epinephrine (adrenalin) to control hemorrhage. In most cases, I use butyn alone.

4.—Butyn solutions are mildly antiseptic and wounds heal rapidly.

5.—There is seldom after-pain, if sharp and broken pieces of process are not left.

6.—There are few reactions on pulse, respiration, or color. Toxic manifestations of any kind are extremely rare.

I have also found butyn very efficient in numerous other ways.

In scaling and planing the necks of the teeth, especially in deep pockets, I frequently dip the instrument in powdered butyn or a saturated solution of butyn, each time it is inserted into the pocket. This not only reduces the pain, but, owing to the antiseptic properties of the drug, results in rapid healing as well.

I have found a solution of phenol, eugenol and butyn a great help in drilling sensitive cavities. A pledget of cotton saturated with the mixture is placed in the cavity for a couple of minutes and a small amount of the decayed dentine removed after each application. It works especially well in removing the softened dentine from children's teeth.

In several cases of extraction in children's teeth and in teeth loosened from pyorrhea, I have obtained sufficient anesthesia by simply dipping two pieces of wet cotton in powdered butyn, placing them in position on the gum on both sides of the tooth, covering them with a couple of pieces of oiled silk and applying gentle pressure with thumb and finger for a few minutes.

This method is also used to prevent the pain of inserting the needle when the patient is extremely sensitive.

I discontinued the use of conductive anesthesia several years ago, because infiltration is just as efficient, far less dangerous, lasts just as long, and saves time. I operate the moment the infiltration is completed.

I have used butyn in conductive anesthesia in only two cases and obtained complete anesthesia in about five minutes.

While these two cases are too few to base any judgment on, yet, they lead me to believe that butyn will be found to be more than twice as rapid in action as procaine in cases of conductive anesthesia.

The Treatment of Chronic Myocarditis

By WILFRED G. FRALICK, New York City

WHEN all is said and done about the treatment of various chronic cardiac affections, the fundamental goal alone remains, that of successfully combating the myocardial incompetency. In the volumes that have been written upon the subject, and which contain numbers of pathological classifications of causes affecting the heart muscle, it is really only in the acute stages of myocardial disease that the etiological factor predominates in the clinical picture, such as diphtheria, various fevers in association with pericarditis and endocarditis, etc.

It is, however, during the chronic stages of myocardial insufficiency that the physician is most frequently consulted, usually by patients of middle age, who, otherwise apparently robust, have been suddenly aroused to the necessity for medical advice on account of dyspnea, precordial distress, increasing fatigue after physical or mental exertion, and, at times, insomnia. In addition, any one of a number of gastrointestinal and renal symptoms may be the first signal, such as anorexia, indigestion, flatulence, or, upon examination, albumin in the urine.

Regardless of the character of the pathological changes in the heart muscle, or whether the exciting cause arises within the heart itself or outside of it, the clinical symptoms and the indications for treatment depend upon two important factors; first, taxation upon the functional capacity of the heart; and, secondly, interference with its nutrition.

Condition of Heart Muscle Important

When we discuss the treatment of myocardial incompetency, we are considering the whole subject of heart disease. Furthermore, in thus approaching the clinical aspect of the subject, there is joined thereto the additional feature that, unlike other parts of the body, the heart must continue to function for the rest of the body as well as for itself, and that it cannot become the subject of manipulation or direct therapeutic intervention. Therefore, no adequate conception of cardiac therapeutics is possible without establishing the heart muscle as the basis for the treatment, both as to its functional capacity as well as its recuperative power. Disregard of this self-evident fundamental requisite probably has been the chief cause for many failures in cardiovascular therapy.

The traditional routine employment of auscultation has caused us to place too much reliance upon the stethoscope alone which, after all, furnishes relatively little information about the myocardium in comparison to the valvular defects, which may be marked in conjunction with a perfectly functioning heart muscle, and vice versa. The number and varieties of cardiac pathological changes seen at autopsy in patients, who have died at advanced ages and from intercurrent affections, corroborate this.

There exists in every heart, in health as well as in disease, a "sinking fund" of reserve energy. In health, this is drawn upon under exertion and any undue or unaccustomed demand upon the heart muscle. In disease, this reserve power furnishes the recuperative power of the organ, until such a time as compensatory energy and hypertrophy become inadequate. And it is here that the line of demarcation is established between premature and prompt therapy.

The environmental conditions are of extreme importance to the heart muscle. As vividly expressed by William Dean Collier' "Physiologic and anatomic changes in the vital phenomena of the heart muscle occur in response to changes in its environment, these changes being stimuli, either quantitative or qualitative, although the primary effect of the stimulus upon the cell is always quantitative. All changes in the vital processes of the cell due to external conditions are manifestations of irritability, the two processes of excitation and depression being displayed. Excitation involves increased depression, decreased response of the specific mechanism depending upon the intensity, duration, and kind of stimulation."

Need of the Simple Life

Hence, the importance of regulating the lives of patients suffering from myocarditis, by cautioning them against intemperance in eating and drinking, interdicting alcohol and also tobacco where necessary, advocating rest, advocating exercise as may be adaptable to each case, and freedom from worry and excitement. As long as compensation is preserved, medical advice is usually not enlisted, while the compensatory hypertrophy is of course unknown to the patient. In this stage, as a very useful measure, golf is an excellent form

of exercise, as it is not only obtained outdoors (thus supplying the body with oxygen, often so badly needed in these cases), but is one of the forms of exercise the quantity of which, at a given time, can be regulated.

Rapidity of the heart action and especially palpitation, frequently combined with a beginning dyspnea, are often the first symptoms indicating a disturbance of the cardiac muscle. Here, the temptation to give cardiac drugs often beclouds the judgment of the physician. A free purgation, enforced rest, or abstinence from any of the frequent causes for cardiac irritability, may cause a prompt readjustment. Restriction of diet, both as to quantity and character of the food, is now indicated. Continued catharsis, however, is contraindicated, as, in the first place, it weakens the patient and, secondly, interferes with the tonicity of the gastrointestinal mechanism.

There are, of course, unfortunate emergency cases where there is no possibility of regaining the lost compensation and where sudden death occurs. There are also cases associated with sclerosis of the coronary arteries, and of grave prognosis; and there are those in which the principal manifestation is that of angina pectoris, as well as those with acute dilatation and even rupture of the heart muscle. But, the average case of myocardial inadequacy, as a rule, presents a stage for intelligent and common-sense supervision and management that will offer many years of comfort and physical stability.

With the proper cooperation of the patient, there are few instances of such gratifying results as those manifested in properly managed cardiopaths, with whom there remains for many years a credit balance in the ledger of health. This is, after all, but the maintenance of a tonicity that preserves the equilibrium between the heart muscle, the tensile response of the walls of the arterioles, and the nourishment of the cardiac musculature, assisted by the recuperative period between the heart beats. Indeed, according to Norman W. Markwell¹ an initial intrinsic period of ventricular systole exists and can be recognized. This initial intrinsic period is the measure of the reserve of the heart muscle. Its duration can be determined by the trained ear, and it can be demonstrated in the cardiogram. Shortening of the initial intrinsic period is a necessary accompaniment of a lessening of the reserve in the initial stages of which there are, typically, no heart symptoms. Immediately after the commencement of ventricu-

lar systole, the heart impinges against the unyielding tissues anterior to it. Ordinarily, this occurs at the point of the normal apex beat. The periodic incidence of this moment is variable.

When Cardiants Are Required

Assuming that, in spite of the reciprocal cooperation of physician and patient, evidences of failing compensation appear, and the heart can no longer supply sufficient reserve power unassisted, we are now obliged to change our management from defensive to aggressive therapeutics. Our best weapon is digitalis. There are many valuable drugs for heart disease, alone and as adjuncts to digitalis. There is no drug, however, in my experience with diseases of the cardiovascular system associated with failing compensation, that displays the selective affinity for stabilizing the disorganized rhythm, strengthening the heart, and relieving distressing symptoms, like digitalis. Quite often, it will be found necessary to combine it with nitroglycerin or strychnine, or to give additional drugs for associated indications; but, I have found it indispensable as the basis for cardiac therapy characterized by decompensation, unrelieved by management other than medicinal.

The preparation, dosage, and method of administration are important. The dosage depends upon the potency of the preparation and the facility with which it is absorbed. It is astonishing at times to observe the variability of tinctures, which has caused me to discard them entirely. Digitalis is one drug which, from my observations, does not lend itself to the preparation of a tincture of constant therapeutic activity. The initial dose of one of the potent and uniform preparations, among which I have found the soluble digitoxin of Cloetta² (known as digalen) to be therapeutically the most reliable, is from 10 to 15 drops, two or three times daily. In cases of emergency, this preparation lends itself to instant intravenous administration with prompt cardiac response and will tide many a case over a grave crisis. I first made use of digalen while making a clinical investigation of digitalis, a number of years ago, and, in a previous article³, I was able to show the prompt and pronounced increase of leucocytosis produced by intravenous injections in patients requiring operation but in whose cases operation had to be delayed until a higher resistance had been established which made operation safe. In my various experiments, the results obtained from digalen were so constant

that I have come to rely on it in all conditions in which digitalis should be employed.

It can also be given per rectum. According to Erich Meyer³, in the case of patients who vomited or were refractory when the preparation he prescribed was given by mouth, his results by rectum were sometimes better than those obtained by intravenous administration. The good effects are explained by the easy absorption of aqueous solutions from the rectum and the transmission through the inferior hemorrhoidal veins direct to the vena cava, as, even if there is congestion in the portal circulation, a collateral circulation develops through the superior and inferior hemorrhoidal veins. The author alternates, ordinarily, between rectal and intravenous administration, but prefers the rectal when the skin veins are badly situated, when there is marked edema, danger of thrombosis, in cases of long-continued congestion of the liver, and in cases in which, for external reasons, intravenous injections cannot be given continuously. But, the intravenous and rectal administration must be alternated, or the former must be discontinued entirely.

Causes for Cumulative Effect and Gastric Irritation

I have been convinced for some time that the so-called cumulative effect of digitalis, and the one-time supposed contraindication for its employment (that of fever) as well as the occasional gastric irritability following its oral administration are but different manifestations of variations in the preparations and the naturally resulting difficulty of controlling its physiological action. Digalen appears to be exceptionally free from these objections. According to Pardee⁴, patients with auricular fibrillation may take digitalis continually *all of their lives*.

Of course, there are cases of heart disease with gastric irritability, but otherwise the

stomach ought not to be directly deranged by a good preparation. Where such irritability pre-exists, oral administration should temporarily be suspended; or, as Hare⁵, has pointedly said, "Often, when a patient has been taking an ordinary preparation of digitalis without good results, I have seen the use of a physiologically-tested and active preparation to good." My experiences with digalen substantiate this. When very large doses are administered, it is probably true, as observed by G. Canby Robinson⁶, that nausea and vomiting are due to direct action on the vomiting center in the medulla, and are an evidence rather of potency than irritability, and that preparations which fail to produce this central nausea and vomiting, when given in large doses, are either weak or not well absorbed.

The musculature of the heart is the engine whose motive power is the basis for therapeutic calculation in heart disease, and furnishes the indications and contraindications for drug therapy. It is one of the structures that cannot be laid up for repairs, and imposes upon the physician the dual responsibility of furnishing for the cardiac engine both the steam and rest while it is in motion.

Finally, there are cases of myocardial failure with hypertension producing great distress upon the heart chambers, for which venesection will do a great deal of good and assist in tiding the patient over critical periods.

Each case should be carefully studied as an individual problem, and the condition of the heart muscle be the guide for therapeutics.

¹William Dean Collier, *Jour. Med. Research*, 43:207, April-May 1922.

²Norman W. Markwell, *Med. Jour. Australia*, 2:537, Sidney, Dec. 10, 1921.

³Cloetta, *Munch. Med. Woch.* 1904-33-p. 1460.

⁴W. G. Fralick, *Med. Times*, Aug., 1916.

⁵Erich Meyer, *Berl. Klin. Woch.*, 1:57, Jan. 8, 1922.

⁶Harold E. B. Pardee, *New York State Jour. Med.*, 22:131, March, 1922.

⁷Hare, "Practical Therapeutics," Lea & Febiger, Philadelphia.

⁸G. Canby Robinson, *Medicine*, 1:1, No. 1, May, 1922.

IF in therapeutics, we lose faith and hope, we become in a measure paralyzed, and what is perhaps worse, we develop an underlying feeling that we are sailing under false colours and are not giving a QUID PRO QUO, or as Goodhart puts it, a QUO PRO QUID. Today surely there is no room for faithlessness nor hopelessness; our knowledge is infinitely wider and surer; it still is very necessary to keep the judicious and critical mind, but our power over disease is daily increasing.—THOMAS BODLEY SCOTT: "Modern Medicine." 1916.

Chronic White Spots in the Skin

An Important Sign in Epilepsy

By EDWARD A. TRACY, Boston, Massachusetts

Neurologist, School Physician in Charge of Clinic for Nervous and Epileptic Children, Forsyth Dental Infirmary, Boston, Massachusetts.

IN my student days at the Harvard Medical School, some years since, it was taught that signs were more important than symptoms for diagnosis, for the reason that signs are objective while symptoms are subjective and can be feigned.

Let me present, for the consideration of every practitioner, an important sign in epilepsy—chronic vasoconstriction spots, chronic white spots in the skin.

It is one of the new findings in this disease reported by me in the *Interstate Medical Journal* (May, 1917). The findings therein reported are enumerated thus:

- 1.—Chronic vasoconstriction spots.
- 2.—Abnormal reflex vasoconstriction phenomena.
- 3.—Increased tonicity of sympathetic fibers, preceding convulsive seizures.
- 4.—Abnormal face reflexes.
- 5.—Hypercontent of adrenin in the blood stream.
- 6.—Lowered content of lime in the bones.

Through the kindness of Dr. E. E. Southard, at that time Professor of Neuropathology at the Harvard Medical School, I was enabled to examine a considerable number of epileptics in the Monson state hospital and to verify the

commonness of most of these findings in this affliction.

Professor Southard's interest in epilepsy had already been manifested by the publication, in 1908, of his thoughtful and fruitful paper "On the Mechanism of Gliosis in Acquired Epilepsy." It was this that led me to report these findings to him and, indeed, it was his authoritative statement, that no similar findings had been hitherto reported, that led me to designate them as "new" findings.

The first of these, the chronic vasoconstriction spots, interested him particularly, an interest manifested by the following note he sent me:

Psychopathic Hospital,
74 Fenwood Road, Boston.
Sept. 18, 1916.

Dear Dr. Tracy:

I think the proof of Tracy spots should be made photographic and I am wondering whether you would not show us some of the spots . . . at the Psychopathic Hospital and allow me to get Mr. Herbert W. Taylor, a very competent photographer, whom we have used in photographing lesions very difficult to show in pellagra, to photograph the spots.

Yours sincerely,
E. E. SOUTHARD,
Director.

Following the reception of this note, I brought (Sept. 25) a case of chronic epilepsy



Fig. 1.

Fig. 2.

Fig. 1. Showing chronic vasoconstriction spots on left cheek of boy.

Fig. 2. Chronic vasoconstriction spot on left cheek of girl. The heart-shaped dark patch over the cheekbone is a birthmark—a naevus; to the right of it is seen the chronic white spot.



Fig. 3. The back of left hand and wrist of a girl 15 years of age, showing a chronic vasoconstriction spot. (The thumb of assistant who held the hand in position while being photographed is also shown.) This is from a case of incipient epilepsy.

(the patient upon whom the spots were first noticed) to the Psychopathic Hospital and, after showing the spots to Dr. Southard and Mr. Taylor, the spots were photographed. Mr. Taylor, having some doubt as to the spots showing well in a photograph, took six consecutive exposures. The spots showed clearly on every plate. Moreover, on some of the plates, phenomena were noticed that confirm the finding of an increased tonicity of sympathetic fibers in the period preceding a convulsive seizure. The photos happened to be taken about ten hours before the patient suffered a series of severe convulsions, as is related in the *Boston Medical and Surgical Journal* for Jan. 2, 1919.

I present to the readers of the JOURNAL a few photographs of chronic vasoconstriction spots, taken from cases of epilepsy treated at the epileptic clinic of the Forsyth Dental Infirmary. They were taken at the clinic by Dr. Arnold Donowa.

I ask the JOURNAL's readers, such of them as treat cases of epilepsy, to look for these spots on the arms, backs of the hands, and on the face. The spots are invariably present in cases of epilepsy. They are chronic in location, not ephemeral.

They have a diagnostic importance since they are present in incipient cases of the disease, before any convulsions have occurred. The importance of recognizing epilepsy in the incipient and most curable stage need not be dwelt on in this communication. The subject was carefully treated in a paper read at the Boston meeting of the American Medical As-

sociation, June, 1921, and published in the *Medical Record*, March 11, 1922. In the chronic disease, the presence of the spots in conjunction with other objective signs, certain abnormal vasomotor reflexes, furnish trustworthy data for making an accurate diagnosis of epilepsy, independent of any history in the case. I will relate one out of many illustrative cases.

One Sunday morning (March 16, 1919), I was called to see H. E., aged 51 years, who had fallen in the bath room of his lodging house. Found him unconscious, and had him carried to his bed. (His landlady informed me that her lodger was in the habit of taking liquor Saturday nights, and she believed he had taken too much the night before.) After a while, during which he rambled in speech, he became conscious and complained of pain in his back. Examination showed local tenderness over the seventh and eighth ribs (left back). On left forearm, near wrist, were two intensely white vasoconstriction spots. Vasomotor testing showed unbalancement of the vasoconstriction reflexes, and a hypertonia of the sympathetic fibers supplying the blood vessels in the right cheek. On inquiring for his previous history, I found him non-communicative; denied any previous similar attack. Evidently an intelligent American, I deemed it well to try for further information and, suddenly bringing to his attention the white spots near his wrist, I said that the examination I had made in conjunction with these spots informed me as to his condition, that, he need not hide his history from me; that he

had epilepsy. He then admitted having had several previous attacks of *grand mal*; that in his boyhood he had frequently fainted at the sight of blood; that all his life he had been subject to dizzy attacks, which, when severe and causing him to fall, were attributed to "biliousness." In one of his previous *grand mal* attacks, he had suffered fracture of ribs. In this case, the reticence of the patient in giving a history, before being confronted with the tell-tale spots, may be accounted for by a fear of losing his employment were his condition known, he being connected with the Government service.

The spots are not always readily detected. Most of the times, their tint differs but little from that of the surrounding skin. This doubtlessly accounts for the fact that they have escaped the notice of previous investigators. However, when once the attention

has been directed to the spots, even when not intense in character, they are readily recognized. This I know from experience with many nurses at my clinic for epileptic children at the Forsyth Dental Infirmary. The nurses readily detect the spots on the new cases appearing at the clinic for diagnosis and treatment. Furthermore, several parents, after their attention had been directed to the spots in the cases of their children, have reported later that they noticed the spots to become whiter than usual on days when the attacks (*petit mal*) were more frequent. This interesting clinical observation by the "laity" confirms similar observations previously published by me.

These spots ought not miss recognition by the practitioner; they are an objective sign in epilepsy that is readily observable even by the laity, as this communication indicates.

Immunity in Cancer

By EDWARD PERCY ROBINSON, New York City

THE suggestion to immunize patients against cancer would appear at first glance to be the most audacious idea ever advanced. Nevertheless, on closer examination, the possibility of this expression applied to prophylactic therapeutics in malignancy may have justifiable grounds and, if it is permissible in medical practice to reason by analogy, then let us see on what basis we may arrive at a logical deduction regarding immunity from cancer.

In the study of cancer, investigators of this mysterious disease appear to have devoted most of their time to the study of the physical changes of the cell rather than to the chemical changes of the plasma. If we ask what the difference is in the chemical composition of the plasma of a healthy human being and that of one afflicted with cancer, the question remains unanswered.

Since it is the cell in which we are better able to judge the pathological progress of the disease, let us consider some of its properties.

According to Delafield and Prudden, "Different parts of the cell have special functions to perform. Thus, the nucleus presides over the constructive metabolism, or assimilative process of the cell, and furnishes the physical basis upon which the transmission of hereditary characteristics depends. The cytoplasm

of the body, on the other hand, is concerned in those phases of metabolism which result in the liberation of energy in movements of various kinds and in the formation of new chemical substances." It is this particular property of the cell, to form new chemical substances, which is so important in the development of cancer.

The "Formative Stimulus"

Let us suppose that we have to deal with a tumor which may be looked upon as an incipient cancer. Ehrlich claims that "A tumor, in order to grow continuously in an animal, requires certain specific substances which permit of its growth, the nature of these substances being unknown; if they are not present, the tumor does not grow; when they are exhausted, the tumor undergoes spontaneous regressions." Some have applied the term "formative stimulus" to these specific substances, for it is logical to assume that, if cells which were previously normal begin to acquire growth, some stimulus must have been generated, and this stimulus could have come from no other source than that of the blood. McFarland, in his "Biology, General and Medical," states that "a trifling modification in the chemical constitution of a vital substance may give rise to a profound alteration in its physiological properties." From this, we may deduce that an individual, who has been living

on foods which are not properly digested and which create end-products difficult of oxidation, will have brought about changes in the blood. It is by these changes that the cell is supplied with material from which it may manufacture new chemical substances.

The Salt and Acid Theory of Cancer Causation

In 1918, I advanced the hypothesis that cancer was caused by an excessive use of salt and by acids created through a too abundant meat diet. To this, some have applied the term "salt and acid theory." Experiences in the past five years have demonstrated the truth of this theory. Patients with unmistakable cancer have been relieved of the disease and restored to health. In verification of this statement, we have the word of hundreds of physicians who give instances of advanced cases of cancer yielding to the influence of medicinal treatment. If it is possible to bring about such gratifying results in advanced cancer, may we not reasonably assume that similar treatment, applied during the precancerous stage, would act as a prophylactic measure and produce immunity to cancer? If this assumption will stand the test of mental digestion, then let us consider the outward signs which may be looked upon as denoting a precancerous stage.

About a year ago, Dr. Frank B. Moore, of Chicago, published, in the *Illinois Medical Journal*, a list of objective symptoms which he regarded as belonging to the precancerous stage. This list, with his comments, follows:

"There has, so far, been considerable speculation about the precancerous stage and some attempts have been made to establish definitely the relationship of certain types of malignancy to certain conditions which have often been found, clinically, to precede them. For instance, the etiological relationship of gastric ulcer to gastric carcinoma. This has been well worked out and the sequence found to occur frequently enough to warrant the assumption that chronic ulcer of the stomach is often the precancerous stage of ultimate carcinoma.

"The precancerous stage is that stage which shows in itself no definite symptoms of malignancy and, yet, which is often found, both clinically and pathologically, to precede true carcinoma. The question, of course, is still open as to whether the condition has not been cancerous from the beginning and is not, therefore, really precancerous at all; but, as there are no findings of malignancy in these early stages and as they are clinically inseparable from benign lesions which do not always become malignant, we have no grounds for assuming that they are merely, in themselves, the beginnings of true malignancy. So long as this is true, the term precancerous seems the only appropriate and justifiable one.

Precancerous Conditions

"As a working basis, then, for this discussion, we may call a condition precancerous when it presents those signs, symptoms and pathological findings, which may indeed lie latent for years or for the entire life-cycle of an individual, but which also, under the stimulus of certain conditions which we do not now recognize but which we assume to be etiological factors, develop into and become true malignant or carcinomatous growths.

"In this sense, we recognize as precancerous, many conditions, some of the most frequent and important of which are:

Skin:—Xeroderma pigmentosum.

Chronic dermatoses from exposure to light, X-rays, etc.

Pigmented nevi or moles.

Lupus vulgaris.

Lupus Erythematosus.

Chronic scaly lip.

Fissures of lip.

Keloids.

Tongue:—Leucoplakia.

Luetic scars.

Wounds from jagged teeth.

Esophagus:—Luetic strictures.

Strictures from injury, caustics and other causes.

Stomach:—Peptic ulcers.

Intestine:—Chronic inflammation and diarrheas.

Rectum:—Fissures.

Hemorrhoids.

Polyps.

Chronic symptomatic diarrheas.

Gall-bladder:—Chronic cholecystitis.

Gall-stones.

Pancreas:—Chronic pancreatitis.

Pancreatic calculi.

Uterus:—Chronic endometritis.

Hyperplasias of various origin.

Lacerations and erosions of cervix.

Hydatid mole.

Breast:—Chronic mastitis.

Chronic eczema of the nipple.

"These conditions, while in themselves benign, are known to be the forerunners, in many cases, of true malignancy. They are definitely not malignant in themselves and, if left to themselves, do not always become so. They are, however, the fertile soil, ripe for development; and, given this soil plus the unknown factor or stimulus which may or may not be the directly exciting cause of carcinoma, they develop, often very rapidly, into typical malignant growths."

In this list, there are but few conditions which might exist without some constitutional symptoms. If a careful history be taken and a thorough examination gone into, it will be found that a large majority of these precancerous manifestations are accompanied by constipation, digestive disturbances, anemia, edema, and symptoms pointing to renal and circulatory disfunction, etc. We, therefore, have, in the precancerous stage, both objective

and subjective symptoms to guide us. Timely recognition, then, of these precancerous symptoms is the key-note to the eradication of cancer. If, now, at this stage we treat a patient and are able to remove all the manifestations of faulty metabolism, we have, by the means employed, restored such a patient to health and made him immune to a possible malignant state. The word immunity means "security against any particular disease." The popular employment of the word, however, is associated with the practice of serology. Nevertheless, there is no valid reason why its application to other branches of medicine should not be permissible.

Experiences in Treatment

Within the past four years, I have had varied experiences in the treatment of cancer subjects. Some have died, while others have recovered and are still alive and enjoying health. A case of cancer of the rectum is recalled in which a diagnosis was made by six physicians and the patient given a few weeks to live. This was two years ago and, as the result of medicinal treatment, the patient is well, able to work and has no evidences of the trouble. In this instance, the treatment must have dissipated the active agent which was present and caused the condition of malignancy. The "formative stimulus," if we may accept the expression, was removed; in other words, oxidized. Logically, then, since security against the disease has been acquired, the patient must be considered immune. As in any disease, the possibility of a recurrence must be borne in mind, since there is hardly any disease in which one attack guarantees absolute protection, and cancer would not be an exception in this respect. A return to the old habit and custom of an excessive meat diet and the unphysiological use of salt will, in all probability, bring about the same condition which existed in the first place; namely, cancer.

This case is but one of a large number. Physicians from every part of the country are treating cancer medicinally and giving thereby a grant of immunity to the patient. Space will not permit reports of other instances in which recovery has been the happy termination of a desperate malignant condition.

Many conceptions of a thing may be had from the angle in which it is viewed. To every human being, the word cancer is welded with that of death. Even to those of the strongest minds, this word strikes at the bot-

tom of the most stolid fortitude. Few there are indeed who will not blanch when told that their condition is cancerous; and it seems the popular thing nowadays to look upon everybody over forty as having entered the cancer age. This seems to me to be a form of propaganda for obvious reasons surgical. However, if we can soften the dread of a disease and remove the natural fear from the mind, do we not at the same time offer a measure of suggestive therapy which in itself is curative? May we then, without overstepping the bounds of propriety, say to a patient that medicinal treatment will grant immunity to cancer, provided treatment is commenced in the early stages and certain precautions are observed? And does it not seem more rational to begin treatment in the early stages of cancer, when immunity is problematical, rather than attempt treatment after malignancy has ravished the patient and depleted all the recuperative forces?

Unfavorable Prognostic Factors

Certainly, any hope of recovery after a cancer subject has become xanthochroous is futile. Destructive reactions in the blood, so complete as to produce changes in the pigmentary layer of the skin, may be safely regarded as an unfailing sign of dissolution. Indeed, the nature of a formative stimulus may some day be revealed through the study of xanthin. This amorphous leukomain is found in most of the body tissues and fluids and is formed by the decomposition of nuclein by acids. Nuclein is the essential chemic constituent of the nuclei of cells; and, among the acids which bring about the decomposition forming xanthin, is phosphoric acid. In this connection, it is important to note that an excessive meat diet produces large amounts of phosphoric acid.

In the last stages of cancer, it is not uncommon to find the patient suffering from profound depression, fatigue, vomiting, with or without diarrhea. As these symptoms are identical with those produced by the physiological action of xanthocreatinin, the presence of this poisonous leukomain cannot be ignored. It would not be correct to infer that the symptoms mentioned are solely indicative of death, for they are frequently observed in patients who have no visible manifestations of cancer. Nevertheless, their presence should be regarded as denoting the influence of lethal leukomains. At this particular stage, treatment instituted with the object of bringing

about oxidation could be regarded as a means toward immunity.

Imperfect oxidation results in the retention of alloxur bodies or xanthin bases; of these, the most important clinically may be urea, uric acid and creatinin. Meyers and Lough, in their investigations of the blood in nephritis, showed that, when 5 mgms. or more per 100 Cc. of creatinin appeared in the blood, all such cases terminated fatally. It would appear then that the end-products of catabolism, if not eliminated or oxidized, become fatal poisons. That these products are difficult of oxidation, is shown by the fact that they are deposited and may be the cause of tubercles. It may be worth mentioning here that a substance known as xanthocystin is found in tubercles of dead bodies. This fact alone may suggest a clue regarding the possible source of a formative stimulus in tumors and may aid in shedding some light on the obscurity which envelops the etiology of many skin affections. According to Mathews, "The constancy of the excretion of creatinin indicates that it is, as Folin suggested, an index of the real catabolism of the vital machinery of the body proper, in distinction from that catabolism which increases the free energy."

Cancer a Constitutional Disease

Although the view regarding cancer as a constitutional disease is gradually gaining converts, it is not generally accepted. There are some who reason backwards and regard cancer as the source of the constitutional disorder, rather than reason that the beginning comes before the end. The surgical removal of cancerous tissue has many followers, based no doubt upon the above belief, and it is paradoxical that, while an exact clinical symptomatology may exist in cancer and in nephritis, the constitutional nature of the former is discountenanced and that of the latter accepted. It may be that the certain fatality following the removal of both kidneys preserves the notion that the existence of nephritis bears some relation to faulty metabolism; and this idea is further strengthened by the clinical investigations regarding the influence of salt on the kidneys. For, on a diet rich in protein, purine, carbohydrate or chloride,

there will be a correspondingly high percentage of urea, uric acid, sugar and chlorides in the plasma, and, when these substances are found in a specimen of urine, nephritis is suspected. The activity of the kidneys is not confined to one function, their proper duty is, to separate from the blood the injurious products of metabolism and to prevent the loss of those substances needed in nutrition. Therefore, it is important that the residue from food substance does not overtax their functional capacity. The seasoning of foods with too much salt is probably one of the greatest factors in disorganizing metabolic processes of the body. Richter states that "The tendency to salt retention is seen especially in the overloading tests after a few days, in which a uniform amount of salt is given beforehand." How injurious this retention must be after years of salt eating, is shown by the enormous mortality from Bright's disease.

In regulating the diet of a sick person, one, for example, who might be suffering from nephritis, heart disease, high blood pressure, edema or cancer, it is customary to restrict such foods from the diet as salted meats, fish and cheeses, fats of all kinds and foods which produce large amounts of sulphuric, phosphoric and amino acids, etc. Among the beverages which may be restricted with advantage to the patient, are coffee, cocoa and tea, since their alkaloids, caffeine, theobromine and theophylline are methylpurins, all of which are capable of producing uric acid. If it seems wise to prohibit the ingestion of certain foods when a patient is ill, and if, through this restriction, health again returns, is it not reasonable to infer that the diet bears some relation to the recovery of the patient? Otherwise, why change the diet?

If the mind is favorably receptive to the physicochemical nature of nephritis, why should mental processes be negative when relative conditions are cited regarding cancer? If medicinal treatment is indicated in one instance, why should not similar treatment be proper in analogous conditions? Therefore, the constitutional nature of cancer should cease to be a question of doubt and should be recognized without fear of ridicule. Courage to be governed by one's convictions is not a sin.



Memoirs of the World War

By GUSTAVUS M. BLECH, Chicago, Illinois

[Concluded from February issue, p. 123]

CHAPTER X.

L'Avenir

WE have won the greatest war in American history! The greatest military power on earth, apparently strong enough to defy the entire world for years, has been crushed—thanks to American prowess! What need is there for a large regular army? What need for military preparedness? Let any nation dare defy us, we have but to remind them of what we did to the Kaiser's cohorts, to paralyze any military enterprise against us. This will be the cry of pacifists.

In the preceding pages, we have intimated what a tremendous amount of energy and hurried work was required to raise, equip, and train a force sufficiently large to give the enemy the *coup de grace*.

The nature of the narrative has been such as to render a detailed discussion of all phases impossible; but enough has been told to convince the reader that, even after a year's preparatory work, all has not been well with us. Even a tyro must realize that, had not the French and British held the lines until we could get ready, had we been compelled to give battle immediately after mobilization, our little Regular Army and our partly-trained National Guard would have been annihilated in the course of a few weeks. Every country boasts of a class of citizens, consisting of short-haired women fanatics and long-haired he-weaklings, who are opposed to any and all discussions of military preparedness. For this class of maldeveloped beings, we can only feel pity and advise treatment by alienists. But, for the men and women of worth and character who are pacifists by conviction and for the masses who are too absorbed in their individual interests to pay attention to one of the most important problems confronting our country, the time has come to unite on a plan to prevent war, if they really desire permanent peace.

"Who will attack us?" they ask. "Who will attack us?" they asked before the World War, and the answer was: A powerful military machine with the government of which we have done our utmost to maintain friendly diplomatic relations.

Practical Pacifism

And, why not? We were looked upon as

physical weaklings, as a nation too engrossed in the accumulation of wealth to develop our military muscles, with the result that the "Lusitania" is today a coffin for many innocent American women and children on the bottom of the ocean instead of a transatlantic liner crossing the ocean in the service of civilization! Indeed, Moltke was right when he exclaimed: "*Si vis pacem para bellum!*" (If you want peace, prepare for war). Had we had a million trained reserve soldiers with a practical system of mobilization to transform them into homogenous military units, there would have been no world war as far as our nation is concerned. Ask our *real* and *patriotic pacifists*; the officers and men of the army who have fought in the trenches (for, real soldiers know the horrors of war), and they will tell you to a man that America has but one way to insure peace; namely, to prepare for war!

One need but glance at Europe to realize that visions of universal peace must remain—visions. Four years of bloodshed, famine, pestilence and misery almost over the entire European continent have brought exhaustion and peace only to the largest powers. The smaller races and peoples are still fighting for the realization of their weird national programs.

As these lines are being written (Fall, 1921) and now that our volunteer army has been demobilized, our neighbor south of the Rio Grande feels courageous enough to do all in his power to drive us into a state of war. Who knows but that, when this book shall see daylight, our military resources will have to be drawn on again to bring law and order into a country ruled by elements appropriate for such tribes as the Malissori in the Balkans, but not for a large, modern nation?

It is not the author's purpose to formulate a scheme defining what the military program of our country of today and tomorrow shall be like. Even if he were an acknowledged military authority, the recommendations of one man would carry little weight, especially since our highest military leaders are not agreed on details.

Our Available Military Resources

Nevertheless it may prove a fruitful task to discuss a practicable scheme of utilizing our resources. Foremost stands our Regular Army, a model of organization, discipline and

efficiency. What shall it be in size? Shall we have an army of more than half a million, or a smaller force? A theorist would take from his bookshelf a reference book and look up the size of the armies of Germany, France, Austria, Italy, England, and others on a peace footing. But, these figures will prove of little value, for the simple reason that, with the exception of England, most European nations do not depend on their active armies as a first-line defense.

The following figures are taken from an authoritative source:

In 1912, Germany had 600,000 men under arms (active or regular army), 1,800,000 men first reserve and 1,400,000 territorials—a total of 3,800,000.

France, which was supposed to be the nation always dreading an attack by Germany, had, at that time, a regular army of 550,000, a reserve force of 2,200,000, and a territorial force of 2,000,000, a total of 4,750,000, or a little below one million more men than its principal adversary.

Why did France dread Germany? Because the German Army was considered the better trained, the better equipped, the better organized, the better led, and, last but not least, because Germany was known to have additional human resources which, if properly trained, would increase its armed force to a total of approximately six millions. We can see, therefore, that, in our country, even a Regular Army of a million would not suffice for a war against a strong military nation, and that our principal strength must consist of reserves.

The Regular Army

We need a Regular Army for three principal purposes: (1) To protect the nation against internal disorders; (2) as a teaching body for an adequate reserve force; (3) as a force to protect the country against invasion and to garrison our oversea possessions.

Let us briefly discuss these three purposes. As regards the protection against internal disorders, we have gone through as much unrest just now as we shall see for some time to come. There are two classes of people who dream of overthrowing our form of government; first, men who do not know that our constitution is the most liberal that has ever been framed; and, secondly, an irresponsible lot of perverts who delight in calling themselves by a Greek term—*anarchists*—which actually means, no government at all.

For the former, we need a few battalions wherever the disturbers are known to con-

glomerate. For the latter, we need no army at all. Police restraint, a school for feeble-minded, or a hospital for the insane would appear the appropriate remedy.

To instruct our future reserves, we need a large body of teachers, but comparatively few troops. The idea of utilizing the army as skeleton cadres, to be augmented by levies, is fallacious. If the best captain in the world had twenty of the best regular-army soldiers as a skeleton infantry company, and if his company were increased to, say, one hundred men with eighty raw recruits, his company would be very poor until the eighty new men attained the degree of training possessed by the twenty. There has been a popular notion that the twenty trained soldiers could "pull the others through." This is stupidity with a vengeance. Soldiers are not mere males dressed in uniform, they are men who must know their "trade" just as artisans or craftsmen must know theirs. And, one might as well train an entirely new company. The results will be practically the same, all depending on the ability of the teacher and his assistants.

As regards the garrisoning of our oversea possessions and resistance to an invasion, 250,000 officers and men should prove adequate, at least for a few weeks, until we could mobilize our resources.

It would appear, therefore, that an army of about the following size would be sufficient:

10 Infantry Divisions of 20,000 men	
each	200,000
3 Cavalry Divisions, of 10,000 men	
each	30,000
Special troops, e. g., aviation, medical department, ordnance and quartermaster corps, etc.	20,000
Total	250,000

These estimates are not in accord with the Tables of Organization for the World War, but it is believed that the units then prescribed were rather unwieldy, and that an infantry division properly balanced, with infantry, artillery, signal corps, engineers and sanitary troops should not exceed 20,000 officers and men.

Reserve Forces. The National Guard

We next come to our reserve forces. This problem was never worked out satisfactorily. During the World War, we had no reserve in the strict sense of the term; one might truthfully say that we raised an entire new national army.

The only military asset available before the

war, outside of the Regular Army (if we ignore the Navy and the Marines) was the National Guard. The National Guard was numerically a little stronger than the Regular Army, but neither organized, drilled, instructed nor equipped as well. It was a night-school, a "sundown" army pure and simple, and professional perfection was not to be expected. Besides, there was an officer, or teacher, body that was partly good, partly indifferent, and partly bad.

It must be admitted, however, that a little training proved better than none at all, so that, with an added intensive course of preparation, the results in the war against Spain and on the Mexican border are not to be underrated.

As for the World War, no just conclusions can be drawn for either the Regular Army, the National Guard or the National Army, since none of the three forces consisted of trained troops exclusively. There seems to be something akin to antagonism between the Regulars and the National Guard. There is no question that the Regulars would prefer an Army reserve to the National Guard, but the Guard does not deserve to be abolished. It has traditions as a military body and demands autonomy.

To an outsider who is familiar with the circumstances, the whole problem appears as a very simple one. As a matter of fact, the National Guard acknowledges the professional worth of the Regular Army and appreciates that there are many Regular-Army officers who have a kindly interest in and even affection for the Guard. The sentiment of antagonism is based on individual misunderstandings and petty rivalries, which should have no place among soldiers representing one interest—that of national security. The sooner the leaders of the factions come together, take off their coats and go to work, the better for all concerned.

There can be no question about one thing: The Army must have professional supervision over the Guard to insure uniform instruction, equipment and discipline. Other details are of minor importance and can be worked out to satisfy both organizations.

The National Guard should consist of:

16 Infantry Divisions of 20,000 men	
each	320,000
1 Cavalry Division (Texas).....	10,000
1 Cavalry Division (New Mexico-Arizona)	10,000
Total	340,000

This would give us a total mobile force of 520,000 infantry and 40,000 cavalry. Coast artillery has not been included in the estimate. Such a force would not be adequate, however, to cope with even the preliminary military problems of a war with a first-class military power, even if it be assumed that we are fortunate enough to have only one antagonist.

Universal Military Training

Our military policy must contain a definite program of universal military training, and only by such a policy shall we be able to maintain the Regular Army and National Guard at the prescribed strength, no matter whether the authorities decide on larger or smaller forces than those tabulated here.

Past experience teaches that, if we again fall back on voluntary enlistment as a means of recruiting for both organizations, neither the alluring posters of "traveling universities in khaki" nor the advertisements of National-Guard regiments, which promise prospective members the advantage of high-priced clubs, will bring the required number of recruits.

There always have been and always will be a number of young men who like military life in spite of its rigidity, and these will enlist in the Army where they have, in addition to the gratification of their martial tastes, a decent living, or they will join the Guard so as to be able to develop themselves commercially or technically without prolonged interruption; but this number is limited, especially after a war.

The time for all such problems is past. The nation is no longer at a kindergarten age. It has been forced to assume an important place in the council of nations. We have never been particularly liked by other nations, and we are not making many friends now. We have enough wealth to rouse the greedy to fury, and our ideals are a thorn in the flesh of the statesmen who prefer the Machiavellian mask of continental diplomacy to our ways of frankness and sincerity.

How soon the clouds will gather and thunder and lightning concentrate on us, as on an international lightning rod, no one knows! But, it is sure to come, perhaps sooner than most of us dare believe, and it can be averted only by drastic measures. We need a democratic national army; and that, at once. Democratic in the sense that none but the aged and infirm and those exempt by law, on account of vocation, should be excused from military duty. We want none of the privileges

for our armed forces so notorious with the nobility of former empires, except one—the recognition, by the nation, of the fact that *the youth wearing the military uniform is performing a patriotic duty.*

The new army also must be democratic in that it shall be national in character. The scion of the millionaire should be the bunkie of the pauper's son; the college boy the tent-mate of the hod-carrier; the poet the comrade of the grocery clerk.

It is immaterial what we label this duty, whether we call it obligatory military training or compulsory military service. Under a system of universal duty, one implies the other.

And, what valid objection can be made? All citizens, except those excused by law, are subject to duty as jurors in our courts. It is a compulsory service pure and simple, often one irksome to the man who thinks more of his pocketbook than of his duty as a citizen. But, let any class of business men object to the jury system, and they would soon feel the just wrath of an outraged populace. And, yet, jury duty is compulsory. Why object to compulsory military service?

Objectors will reply that there is something unnatural, something barbaric, something uncivilized about the whole military business. But, there are others (and their name is legion) who, too, have a right to be heard.

Military Schools

We have a large number of private military schools and academies to which, in preference to the public high schools, our well-to-do citizens send their sons to obtain an education. Let us ask these level-headed business men, the fathers of the pupils, why they have sent their offspring to schools run on a strictly military basis, and what will they answer?

To prepare their offspring for a military career? Certainly not. To train them for war? Most assuredly not, they never had war in mind. It has been demonstrated that the military training at these schools develops character and cultivates self-restraint and self-reliance, qualities which enable students to follow their civil pursuits successfully.

We should have an American army which would give to the young men similar advantages to those that the military academies offer the sons of the well-to-do. This will provide for the military training of the young men whose business affairs will allow them to spare six months for intensive instruction. Those who feel unable to devote so long a period will find the National Guard an organization where they can obtain instruction on

one or two evenings a week, with a field service in camp during the vacation period.

There remains the problem of recruiting for the Regular Army. This should present little difficulty if a scheme be adopted to free those who complete an active enlistment period from periodic drills during the prescribed years of service in the reserve, and to open to them the possibility of acquiring commissions as regular and reserve officers by competitive examination.

The Officers' Problem

With the adoption of universal military training, we have another serious problem to meet; namely, to supply a sufficient number of suitable officers. For the present, no doubt, there will be a sufficient force; but, in the near future, the problem will become real. Not all our officers have demonstrated their efficiency. Many who had served for years in the Guard were eliminated soon after mobilization. Many National-Army officers, graduates of the officers' training camps, were either asked to resign or sent to Blois. Lest it be suspected that the Commanding Officers were arbitrary or prejudiced, it must be added that a number of officers of the regular establishment were sent back from the front for reclassification.

In previous years, National-Guard officers were elected by their enlisted men, with the result that, often, the man with means or influence won over abler comrades. All this has been done away with. The average American soldier despises a bully, he has contempt for a man who cringes before superiors, but loves and admires the strict disciplinarian who foresees ability and has the interests of his men at heart. He cares little whether a man has the means of patronizing grand opera or has to earn his livelihood by the sweat of his brow, so long as he is the right kind of a man to direct, to teach, to command and lead. Such an officer will be successful—all others will fail. Unfortunately, not all men in officers' uniforms possess the requisite qualities, and now is the time to reorganize the entire officers' corps.

The Medical Officers

A word about the appointment of medical officers. It has been the custom to give regularly-licensed physicians commissions as medical officers and to render assignments to regiments, ambulance companies, and hospital companies—for duty without preparation, except possibly to explain to them the insignia on the uniform and the salute.

But, medical officers have strictly military

duties in addition to the care of the sick and wounded, and they must be thoroughly familiar with many military subjects, practically the same as line and other technical officers, to be able intelligently to instruct their enlisted personnel.

In the Army, newly-appointed medical officers are sent for nine months to the Army Medical School as students, where they are given postgraduate professional instruction, and are also grounded in their new technical duties, such as drill, camp sanitation, map reading and map making, field service regulations, sanitary tactics, military law, administration, etc. Some such plan of instruction should be adopted for Reserve and National Guard medical officers.

To summarize the entire question, the future military program of the United States should be:

1.—Organization of an adequate Regular Army consisting of staff corps, infantry and cavalry divisions, technical troops and coast artillery.

2.—Organization of a mobile National Guard.

3.—Organization of mobile divisions, Reserve, according to population.

4.—All able-bodied citizens and declarants between the ages of eighteen and thirty-five to be subject to universal military training in time of peace. All above thirty-five and younger than forty-five to be organized for home service, in time of war.

5.—Officers to be between twenty-five and sixty-four years of age, citizens of the United

States, selected from graduates of recognized military schools, graduates of army garrison schools, or enlisted men of the National Guard or National Army after completion of an enlistment period, and after competitive examination.

6.—Technical officers (engineers, quartermasters, judge-advocates, ordnance officers, medical officers, veterinarians, dental surgeons, chaplains, etc.), to be chosen from men qualified in similar civil professions after a course of military training.

It is not expected that universal military training can transmute the entire nation into one of Spartan sturdiness, but the men it does reach will not have to fear the law of the survival of the fittest, as has been so unquestionably demonstrated by the graduate of the intensive training schools of the World War.

A few years after the inauguration of universal military training, we shall have fewer sanatoria for tuberculosis and fewer penal institutions. We shall be able to reduce the number of criminal courts.

The greatest economic saving, however, which will affect every tax-paying citizen, will come from the fact that the enormous expenditures incident to modern warfare will be rendered unnecessary. There will be no war, because even the nation with a strong army will not dare to attack us, knowing that a mere click of a telegraph instrument in the War Department will cause "millions to spring to arms overnight."

[The End.]

Treatment of the Anemias

With Protein-Substance Introduced Parenterally

By W. BUSCH and EDWARD AHLSEWEDE, Hamburg, Germany

SINCE the first attempts to influence chronic affections with protein substances that are introduced parenterally, several investigators have made the attempt to modify various forms of anemia by means of "protoplasma activation" of the blood-making organs. Among these, especially E. F. Mueller¹ deserves credit for having demonstrated that, indeed, a distinct increase of hemoglobin and of the leucocytes may be observed after parenteral introduction of protein substances. The favorable effect of this medication is shown also

in the increase of erythrocytes, which is frequently enormous. The same effect is produced in most acute infectious diseases as soon as the severe toxin production lessens and the body cells are sufficiently activated. Commonly, this condition is arrived at at the height of the exanthema.

According to the investigations of Weichardt² of Mueller¹, this general stimulation of cells seems to influence those organs most markedly the function of which has been injured most severely. Among these organs, the bone marrow is especially important. Mueller was able to show that, even after one large-sized injection of milk proteins, an

¹E. F. Mueller. Die myeloische Wirkung der Milchinjektion. *Med. Klin.*, 1918. Nr. 18.

²E. F. Mueller. Beitrag zur Klinik der Infektionskrankheiten. *Med. Klin.*, 1919. Heft. 2.

enormous increase in the number of red blood cells is established (after a dose of 10 Cc. milk protein, for instance, an increase of one million red blood cells). During the following weeks, a distinct increase in the hemoglobin content is observed.

Finsen Light and Quartz Lamp

Since the fundamental researches of Finsen and his school and independently of the studies of the effect of protein substances, the possibility to raise the number of white and red blood cells by the raying of large surfaces of the body has been known. While Finsen employed carbon arc lights and with these secured his far-famed successes in treating lupus and other affections, the quartz lamp has more recently all but pushed aside the arc light. Owing to a somewhat one-sided argument, it was believed that only the ultraviolet rays were the effective constituents of the rays and, therefore, the so-called artificial alpine sun was constructed. However, it was soon found that the old Finsen lamps possessed great advantages and that the effect of the other rays is not to be underestimated.

From the beginning, the erythema produced by the artificial alpine sun attracts attention. This erythema is not red but shows a somewhat slate-colored tint. After raying with the Finsen light, the erythema has an inflammatory red appearance. The pigmentation, also, which develops after raying treatment, is different in the two methods. After treatment with the Finsen arc light, the pigment is a vigorous red-brown; that due to quartz lamp is grayish brown. In people with numerous pigment cells, the pigmentation is important for the estimation of the therapeutic effect.

The original arc-light rayings of Finsen had the great disadvantage of producing much heat, because of which it was necessary to take complicated precautions. This difficulty is overcome very happily by the "Mebolith" lamps made by the Giessen Lichttherapiegesellschaft.*)

In these lamps, the carbons are impregnated with certain metallic salts, so that a mixture of rayings is produced containing a sufficiency of short- and long-waved rays to bring about a vigorous erythema of the skin.

While the cutaneous inflammations induced by quartz lamp affect mainly the superficial layers of the skin, those due to arc light invade the depth of the integument more deeply.

At the same time, the effect of the rays can be regulated more closely and unduly intensive irritation be avoided.

The principal effect of this erythema is similar to that of protein-substance injection. Here, also, it is a question of protoplasmic activation (Weichardt) and of intensive stimulation of cellular activity. Even now, it may be assumed with considerable certainty that the substances discharged into the blood are those ferments which are daily secreted in the ordinary metabolic processes³. According to the fundamental law of Arndt, chronic processes require but small quantities of the effective therapeutic material, while in acute conditions larger doses are needed at once. In chronic affections, however, treatment must be continued for a longer time. The rayings with the Mebolith lamp act in accordance with this law, insofar as they can be regulated so delicately that the effect becomes very gentle.

Deep Stimulation

With these two methods, it is possible to activate at will deep-lying organs which otherwise can be influenced only by Roentgen rays.

In recognized secondary anemia, it is well to administer rayings to as large portions of the skin as possible. The lamps that are most suitable are carbon-pencil arc lamps, in which the carbon pencils are impregnated with metal. As soon as a sufficiently vigorous erythema has been produced, the injection of protein substances is undertaken. For this, the milk albumin preparations are most suitable. It is well to commence with careful doses, in order to determine the reactivity of the patient. About $\frac{1}{2}$ Cc. will suffice for the first dose. If the reaction is slight, one can safely pass on to higher amounts. The treatment will be arranged somewhat as follows:

First to third days, raying with carbon metal lamp. At first, five-minutes' duration, at 20 Cm. (8 inches) distance; on the fourth day, injection of milk albumin, $\frac{1}{2}$ Cc. (8 minims) which, of course, must be free from toxins and bacteria. If the effect is sufficiently marked (which must be ascertained by examination of the blood picture), the injection may be repeated after periods of three or four days. The light-treatments are best administered every second day only, commencing with the third. At the second injection, it is well to administer 2 Cc. of the milk albumin. These injections are repeated every third or fourth day and each time the

*Corresponding serviceable lamps are available in this country, being produced by American manufacturers.—Ed.

³Weichardt und Schrader. Ueber unspezifische Leistungssteigerung, 1919. *Munch. Med. Woch.* No. 11.

blood picture is to be examined. A dose of 5 Cc. should not be exceeded.

Mueller succeeded in producing a sufficiently marked permanent effect by a single injection of 10 Cc. Still, such heroic doses are not always quite unobjectionable. In accordance with Arndt's law, repeated injections of smaller amounts are followed by the same lasting effects, and this without danger.

As to Anaphylaxis

In general, it is rarely necessary to go beyond six injections. In these frequent injections of the same milk albumin preparation, one need have no serious fear of symptoms of anaphylaxis.

True, the nature of anaphylaxis phenomena has not yet been sufficiently elucidated. Aman¹ assumes that it is the content in the foreign serum that produces the symptoms of acute intoxication. On the basis of this idea, he has constructed a special preparation of albumin with which he claims to have caused no anaphylactic symptoms. Mueller² considers the cause of the anaphylactic phenomena to be threefold; namely, (1) the bodies of killed bacteria and of endotoxins contained in them; (2) the ekto toxins formed by the bacteria previous to sterilization; (3) the disintegration products of the milk albumin that had already been affected by bacteria.

Thus, Mueller assumes that anaphylaxis constitutes an intoxication with organic poisons, and this view is most generally accepted. Indeed, it has been found that the injection of milk preparations which had been made with most careful attention to freedom from germs or toxins can not give rise to any anaphylactic phenomena whatever.

However, in solutions of pure casein, this is by no means always so. At least in the case of "caseosan," which was introduced by Lindig, occasional by-effects have been observed, so that a careful dosage is necessary in employing pure casein preparations.

In mild anemias, we administer only pure milk-albumin solution. It is only when a repeated and energetic effect is indicated that, instead of a milk-albumin injection, we administer not more than 2 Cc. of a casein preparation.

That even the explanation of Mueller does not exhaust the whole problem of anaphylaxis, is shown by the fact that, after repeated casein injections, very stormy reactions may make their appearance, presenting the clinical picture of ptomaine intoxication. It must be assumed that other factors are concerned which have not yet been elucidated. Very probably, these must be searched for in the field of chemico-physical considerations.

Parenteral Administration

In the preceding, we have referred only to the injection of milk proteins. Two methods are available that are similar in their effects. First, the percutaneous; second, the intracutaneous method of parenteral protein-body therapy. The first method is employed at present mainly by Petruschky³ and by Funck⁴. Petruschky uses a glycerinated tubercle bacillus emulsion and thus employs the bacterial bodies themselves, as well as the endotoxins contained in them, for the purpose of influencing tuberculous foci. His compound tuberculin liniments are worked into the skin by friction without any preliminary treatment. Petruschky has shown, on various occasions, that the bacterial bodies introduced percutaneously in this manner are indeed absorbed by the skin and are slowly disintegrated.

Funck's method is different. He uses a salve in which albuminous substances are rubbed up that are in colloidal solution. In order to render the skin more sensitive and more receptive, he produces a hyperemia before the application. We ourselves administer percutaneous remedies both by means of the protein-substance salve and a solution for injection.

The intracutaneous protein-substance therapy represents a middle way between the two methods described. It is more energetic than the percutaneous application and milder than the injection. It is based upon the prototype of Pondorff's tuberculin vaccination. Although, in the case of Pondorff's vaccination, specific effects can not be quite denied, their main effect, nevertheless, is an unspecific protoplasm activation. On the basis of this idea, we have elaborated a vaccine which permits the proteins alone to become active.

¹Aman, Zur Proteinkoerpertherapie. Mitteil. d. wissensch. Abtlg. d. Fa. Deigmayr, Munchen.

³Petruschky. *Med. Klin.*, 1919. No. 35.

⁴Funck. *Med. Klin.*, 1921.



Some Lessons Learned from School Inspection and the World War

A Study in Preventive Medicine

By J. M. FRENCH, Milford, Mass.

EDITORIAL COMMENT.—The school physician has been opposed strenuously by many people, more especially by those who prefer to resort to drugless methods of healing. These people are afraid that physical examinations made by the school physician are invariably followed by therapeutic measures that are forced upon the children. However, that may be (and there is a great need of better understanding and appreciation of the work of the school physicians), it is quite undoubted that these officers have accomplished a great amount of good. Doctor French's discussion of his experiences constitutes an important corollary to the results of selective-service examinations to which all young men were subjected, a few years ago. In a way, it affords an explanation of the sad and alarming state of affairs that was found to exist. If the American young manhood (and we can safely add, young womanhood) shows physical defects that might have been prevented, the most simple lesson is, that these faults should be prevented even before their first signs appear; certainly not later. The earliest recognition is evidently possible during school life. It is here that the work of the school physician can tell. The school physician, be it understood (and let that be elucidated clearly to the parents), does not treat school children; he examines them for the purpose of discovering any existing anomalies and faults of development. When these have been discovered and have been communicated to the parents, it is clearly their duty to take the necessary steps. They may take the children to their family doctor, or they may ask the school doctor or the school nurse to refer them to the dispensary. At any rate, the indications for treatment discovered on examination should be acted upon promptly. In this manner only may we hope to have the coming generation of young people grow up in a better physical condition.

SO far as I have been able to learn, the objects for which the medical inspection of schools was undertaken may be included under three heads: first, to limit the spread and, so far as possible, prevent the occurrence of the common contagious diseases, both in school and the community at large; second, to prevent, remove, and promote recovery from, a large class of physical defects which are so closely connected with the school age that they have come to be popularly known as school defects which tend to diminish the mental capacity, lessen the attainments of the pupils, and retard their progress in school, thereby seriously interfering with their obtaining a proper education; third, to determine the existence of any other serious defects, disorders, or diseases or the formation of improper habits, which would interfere with their physical or mental development, and, by calling attention to these deficiencies, lead to the proper care and treatment being given to the children by their parents and the community at large.

Although a most important element in the plan as finally developed, it is probable that this last object occupied but a small place in the original idea of school inspection. Even at the

present time, except in the larger cities, it is probably the part which receives the least attention.

The state of Massachusetts established compulsory school inspection in 1907, and I have served as one of the two school physicians in my home town every year since that time, the two working in collaboration and having as one important part of the work the yearly examination of from 2000 to 2500 school children.

Plan of Work

Early in our work, we saw the need of establishing some general principles for our guidance, based on our personal experience. We therefore undertook to keep a complete individual record of the physical and mental characteristics of each pupil, for the purpose of determining the relations between the two elements; and this record we continued to keep for a sufficient number of years to enable us to reach certain definite conclusions.

As our field was a town having in its public schools from 2000 to 2500 school children only, and as we devoted but a small part of our time to the schools, our working plans were necessarily much less extensive and ambitious than

those which were carried out in Boston and other large cities. Only the general outlines having been provided for in the law, we were permitted considerable freedom to develop the specific details according to our own judgment.

The physical defects were arranged in five classes, according to their relation, (1) to the eye and vision; (2) to the ear and hearing; (3) to the mouth and teeth; (4) to miscellaneous conditions including all other local and general disturbances of health.

The educational problems for the solution of which these conditions were to be studied in relation to each pupil were the following:

1.—To what extent is the mental capacity of the pupils lessened, their progress in school retarded, and their persistency in school prevented by the physical defects from which they suffer, and particularly by certain classes of defects which are largely removable or remediable?

2.—To what extent can the mental capacity of these children be improved, their retarded progress overcome or prevented, and their persistency in school increased, by remedying these conditions?

3.—Will it not be financially cheaper and better public policy for the people of any town or municipality to pay out the small amount which would be necessary, in order to remove these defects in the case of those children whose parents are not able to pay for the same, than it will be, on the one hand, to furnish them with the additional schooling which will be required to bring them up as nearly as possible to the normal standard, or, on the other hand, to suffer them to go through life as defectives, both physically and mentally, unable to bear their fair share of the burdens of life, and with a greatly increased liability of becoming public charges?

The Physical Problem

The working schedule divided the pupils into three classes. This was done by first separating them into normals and defectives. Those in whom a slight and cursory examination (technically known as an inspection) failed to reveal any noticeable defects, were classed as normals, and these constituted the first class. Of course, if the examination had been sufficiently critical, there would have been practically no normals. But, this was not in accordance with the plan and would not have been either practicable or desirable. Broadly speaking, we found about ten percent of normals in the schools as a whole.

The remaining ninety percent were classed as defectives, and these again were divided

into two classes. If the defects were slight and were not considered likely to retard the progress of the pupils, they were simply recorded for purposes of observation and for comparison with the conditions that might be found in future years. Sometimes the next year would find them no longer noticeable, showing that they were merely temporary. Again, and more often, they would have become more marked.

If, on the other hand, the defects were of so serious a nature or degree as to make it probable that they would interfere with the progress of the pupils in scholarship, then, as required by law, notices were made out and sent to their parents or guardians, informing them of the conditions noted, and requesting them to take the necessary measures for their relief, repair, or cure. At this point, the responsibility of the state is considered to end, except in cases of contagious diseases or other conditions in which the safety of other pupils is endangered. Much can be done, however, with the aid of the school nurse who follows the pupils to their homes and talks with the parents in such a way as to convince them in a large proportion of cases, and thus greatly increases the beneficial results of school inspection. Also, much may be accomplished by the physician and the teachers, through constant repetition of the importance of the measures advised. The results have shown a gradual improvement in this line with the passing of years, demonstrating a decided progress, both in the greater attention which is paid to the correction of defects, and also, as the result thereof, the improvement in health and vigor, coupled with more satisfactory progress in school. A child whose throat and nasal passages are obstructed by enlarged or otherwise diseased tonsils, or by adenoid growths which prevent his breathing properly, cannot be either physically healthy or mentally acute. Nor can one whose mouth contains malformed, decaying and irregular teeth, mis-shapen jaws and other abnormal conditions often seen in the mouths of school children, expect to escape headaches, toothache, earache, general infection of the whole system, and a lowering of vigor and the vital resistance. The removal of these conditions does greatly improve both, their physical and mental condition. The pupils go through the grades more quickly, and more of them continue the course through the high school. Year after year, the evidence to this end accumulates, and parents and children become more amenable to the efforts of the doctor, nurse, dentist, and surgeon, and pay more at-

tention to the rufts of personal hygiene. I do not mean to say that the progress in this direction is so marked or startling as to lead to the expectation that it will not be necessary to continue year after year the same unending round of effort, but only that it is sufficient to encourage the continuation of these efforts.

The proportion of pupils having only slight defects, as compared with those having serious ones, varies so greatly in the different grades, in different schools, and even in different years, that it is not worth while to attempt to say more than that the number of the slightly defective is usually somewhat greater than that of the seriously defective.

As to the Mental Problem

The next step was, to take up the mental side of the problem, and of this we have necessarily spoken somewhat in connection with the physical. The record was made up from three different lines of investigation which, however, were closely related. The first related to what was usually spoken of as the pupil's mental capacity, although this really required a consideration of the other two elements in order to make possible a correct judgment. We asked the teachers to furnish us with a classified list of their pupils, arranged in three groups; namely, bright, average, and dull. It must be confessed that this test was very unreliable and constituted as much a test of the teachers as of the pupils. But it helped, and we used it. The second item related to the pupil's progress in school, which normally should include one grade each year. But a considerable proportion were repeaters, spending two or more years on a grade. On the other hand, a few were able to take more than one grade in a year, although this was not encouraged or often allowed. The third method had to do with the pupil's persistency in school, or the number of grades out of the twelve in the course which he passed through. Many dropped out at the end of the eighth or last grammar grades. Of those who entered the high school, only a varying proportion completed the course and graduated. However, this was required, in order that the pupil might be marked normal in persistency. If he also completed the course in twelve years, he was likewise normal in progress.

The mental problem, then, consisted in determining the relation of the physical condition to the mental capacity. Three years of careful study of from 2000 to 2500 school children resulted in establishing the following principles:

1.—The normals excel the defectives in mental capacity, in progress in school, and in per-

sistency in school attendance.

2.—Those having only slight defects rank below the normals, but excel those having serious defects, in all these points.

3.—Those having serious defects rank lowest in the scale in all the points considered.

4.—While these conclusions hold true (on the average) for the whole, they are very far from being true in every individual case, or even in every school. Individual instances occur in which the exact reverse is true; but, broadly speaking, they are strongly and unmistakably true.

Evaluating the Results

These lessons were learned through the routine of school inspection; but it is probable that none, even of those who helped to develop them, realized their full significance. Speaking for myself, it was not until years after having developed these principles in my school work, when I was called on to assist in the examination of the drafted men in the World War to test their fitness for military service, that a broader idea of their meaning dawned upon me, and I began to see why it was that so many men were rejected who were supposed to be of at least the average degree of vigor and physical development. Indeed, the World War brought to light many things hitherto unsuspected in relation to the physique and mentality of our young men. It was a great shock to the country at large to learn, as a result of these examinations, that a very large proportion—not less than one third—of our supposedly able-bodied and mentally efficient young men, were unfit for full military service, being rendered so by physical defects or mental deficiency.

Relation to Fitness for Military Service

When these things were checked up by the school physician, he saw that the conditions underlying the failure of the men to measure up to the full capacity required were the same as, or at least very similar to, those which led to the failure of the children in school to attain the proper standard of scholarship; that many of the defective conditions found in the drafted men and the school children were the same; that they were very largely not inherited but acquired; that they began to show themselves in early childhood, brought about by improper habits of living—and, most of all to the point, that a large proportion of them were capable of being remedied, either wholly or in part, by proper medical, surgical and dental treatment, supplemented by intensive training in individual hygiene.

For, we soon saw that the government, real-

izing the importance of the issue, was able by means of repair work, largely done by surgeons and dentists, to make over a considerable proportion of these defectives who were at first rejected, to such an extent that they were later accepted, either for full service or, more frequently, for work in certain limited but still necessary fields of war work, in which it was found that they could do good service. And we saw that the conditions, which at first caused their rejection and later were remedied to such an extent as to allow their acceptance, were of the same general nature as those with which the school physician was familiar in his school work. Decayed, irregular, and otherwise defective teeth, and the lack of a sufficient number of teeth to enable the soldier to meet the conditions of army life as to feeding, were the causes of many rejections in the draft examinations, just as some of these conditions were the causes of defective education among school children; and in both cases the dentist was able to remedy the defects to a great extent, thus restoring the defective to a comparatively normal condition, and enabling the rejected applicant to be accepted. Enlarged tonsils, adenoids and other obstructions of the breathing apparatus, and many other of the common conditions came under the same general rule. Some of these, however, like flatfoot and hernia, were disqualifying for army life to a much greater extent than for school work, unless athletics be regarded as an essential part of school work.

School inspection, therefore, deals with the same conditions as those which were found in examining the drafted men; but, in case of the soldiers, the government possesses the important advantage over the school authorities, in case of the school children, of being able to enforce its decrees, and carry out its recommendations to the limit.

Prophylaxis of Defectives

One lesson to be learned is, that practically the great majority of the defects found in the drafted men could have been avoided or prevented by the proper training and right living of the subject in early childhood. A second lesson is, that, even at the stage when they are

brought to light in both cases, most of them are susceptible to remedial treatment sufficient to greatly improve and sometimes wholly relieve the individual, whether pupil or soldier. A third is that, if school work had been begun sufficiently early and carried out to its legitimate end, the results would have been such that only a much smaller proportion of the drafted men would have been rejected.

Surgeon General Merritt W. Ireland, discussing the physical defects found in the selective draft men during the World War, (*Jour. A. M. A.*, Nov. 4, 1922), after specifying some of the principal ones, such as flatfoot, venereal disease, hernia, errors of refraction, organic heart disease, underweight, tuberculosis, hypertrophied tonsils, defective teeth, and mental deficiencies, concludes with these words:

"It is not necessary for me to say that a great many of the defects mentioned are easily corrected. The fact that they are not corrected diminishes the man's economic value, and in a very material way lessens his happiness in life. Nor is it necessary to point out the measures which should be taken for their correction. Suffice it to say that the physical examination of our children in public schools, and their supervision by health officers while in school; civilian training camps where the young undergo careful physical survey; the encouragement in life-extension work, which includes the periodic examination of all people after they have reached the age of forty; and the general education of the public with reference to the venereal diseases stand among the most important measures."

The medicine of the future should be, and I believe will be, preventive medicine. All right-minded persons desire to make the most and the best of their lives that is in their power.

Frequent and continued periodic examinations, from the cradle to the grave, are essential to the attainment of the highest degree of the physical system. And the lessons learned must be heeded, the unfavorable conditions found removed, and the laws of hygiene followed out.

When these things are done, we may expect to see a great improvement in the health, efficiency, and longevity of the race.



National Maternity Protection

A Timely Review

By E. H. PIRKNER, Brooklyn, New York

WHEN we seek an answer to the question "Is Maternity Protection in the United States necessary?" in face of the facts that each year more than 20,000 women lay down their lives in childbirth and that more than 100,000 infants die before they are one month old, we must be astonished that such mercenary motives as the fear of increased taxation can be obstructive to carrying indispensable education to the very doors of the people, because nothing but education can solve this national problem. Mothers simply do not know that prenatal care is necessary and, unfortunately, representatives of the people seem not to know—to judge from the profound ignorance which has been evidenced in some legislatures, in the debates on federal maternity aid.

Because an expense of money is involved, shall we abandon our efforts, in recent years so successful, of educating the nation in sexual hygiene and permit social diseases again their triumphant course, now halted, of national devastation?

From Chicago, I have recently received the report that a delegate to the Illinois Constitutional Convention, in an address before the fourth annual convention of the American Liberty League, October 31st, 1922, spoke against the federal maternity aid proposition. He pointed out that the Nebraska Legislature had adopted resolutions calling upon senators and congressmen to vote for no new creations of federal aid. "Massachusetts," he said, "and New York have done the same, rejecting the fiscal allotments under the new Sheppard-Towner maternity law. Massachusetts has instructed her Attorney-General to bring action in the federal courts attacking the constitutionality of this law." Mr. S., the delegate afore-mentioned, declared that this bill wished to provide "free public care in every maternity case regardless of the financial ability of the beneficiary." Surely, a distortion of the truth. It was rejected by the legislature which "declined to establish the proposition that parenthood may be lightly assumed; that the child were properly the ward of the State; that the family were no longer the unit of our civil and social life. It is unthinkable that the General Assembly of Illinois will permit Illinois to be bribed by Washington money to establish a principle which our State has rejected as unsound and detrimental to our ideals of independent American citizenship." These

vituperative remarks will hardly be taken seriously by any friend of the people familiar with true facts, but they are a warning that, in places of political influence, most astounding ignorance reigns supreme and demands urgent and earnest correction.

The Educational Character of the Maternity Law, and the Private Physician

Prospective mothers or their relatives do not, as a rule, spend money early in pregnancy for services of a physician which they do not even know to be necessary, and do not apply to a doctor unless actual suffering compels them. Thus, by giving the people what they would not pay for anyway, no danger arises of pauperizing those able to pay. Advice not being offered to them, they do not know that much annoyance from the pregnant state can be warded off in its beginning and later suffering prevented.

For the busy physician and the beginner, there is a convenience in the method in use in New York, since about 1911, of placing nurses salaried by the Health Department, in charge of pregnant women, a method which secures the best financial and ideal results for the physician.

Those nurses also cooperate just as faithfully with midwives—where the case is theirs.

The "Henry-Street" nurses, known all over the world reached by American civilization, skillfully administer aid (prenatal and postnatal) to mother and infant at one dollar per visit.

Incidentally, the registered midwife is permitted to make urine examinations, at least for albumin, and has every chance to render the same service as the trained nurses. If she is ever importuned in an improper way by relatives of a patient, she is in the most favorable position of helping the law of compulsory notification of pregnancy to become effective, as prenatal work should pay her well.

As all education is a gradual process, it is best to make it a public concern from which not only the individual but, in the course of years, also the state profits. The interest of able physicians does not suffer. To them, the women will apply in time, the same as they apply to private schools for special instruction, and their work will be more pleasant through the intelligent cooperation of the women; therefore, it will be more successful.

Without federal control and unless maternity and infancy protection becomes national, there

is little or no opportunity to convey education systematically where it is most needed; namely, to the ignorant masses. Obstructive policy can be explained only by lack of knowledge or understanding.

The Sheppard-Towner Act, the Duell Bill and the Several States

It is to be regretted that New York is one of the few states which has, so far, failed to make the provisions of the federal S.-T. maternity act available to its citizens, the act of congress approved November twenty-third, nineteen hundred and twenty-one, entitled "An act for the promotion of the welfare and hygiene of maternity and infancy, and for other purposes."

No. 97—67th Congress, Sec. 2 reads: "For the purpose of carrying out the provisions of this act, there is authorized to be appropriated for the current fiscal year \$480,000 to be equally apportioned among the several states, and for each subsequent year, for the period of five years, \$240,000, etc., provided that there is hereby authorized to be appropriated for the use of the states, subject to the provisions of this act, for the fiscal year ending June 30, 1922, an additional sum of \$1,000,000 and annually thereafter for the period of five years, an additional sum not to exceed \$1,000,000; provided further that the additional appropriation herein authorized shall be apportioned \$5,000 to each state and the balance among the states in the proportion which their population bears to the total population of the States of the United States, according to the last preceding United States census: And provided further, that no payment out of the additional appropriation herein authorized shall be made in any year to any state until an equal sum has been appropriated for that year by the legislature of such state for the maintenance and facilities provided for in this act.

Sec. 3. There is hereby created a Board of Maternity and Infant Hygiene which shall consist of the chief of the Children's Bureau, the Surgeon General of the U. S. Public Health Service, and the U. S. Commissioner of Education, and which is hereafter designated in this act as the Board, etc.

Sec. 4. In any state having a child-welfare or child-hygiene division in its state agency of health, the said agency shall administer the provisions of this act through such divisions. If the legislature of any state has not made provision for accepting the provisions of this act, the Governor of such state may, insofar as he is authorized to do so by the laws of such state, accept the provisions of this act, etc.

Sec. 8. Any state desiring to receive the benefits of this act shall, by its agency described in Sec. 4, submit to the Children's Bureau detailed plans for carrying out the provisions within such state, etc. . . . , the plans of the states shall provide that no official agent or representative in carrying out the provisions of this act shall enter any home or take charge

of any child over the objection of the parents or the person standing in *loco parentis* or having custody of such child. (This provision alone renders futile the opposing argument quoted previously.)

Sec. 13. The Children's Bureau shall perform the duties assigned to it under the supervision of the Secretary of Labor, etc.

Ten acceptances in Delaware, Minnesota, New Hampshire, New Mexico, Oregon, Virginia, Kentucky, New Jersey, Maryland and Mississippi were made by the state legislatures. In the other states where the legislatures have not been in session during the fiscal year July 1st, 1921, to June 30th, 1922, the acceptances have been made by the governors and it will be necessary for the legislatures to renew their acceptances when they convene next sessions.

The reason why New York has not yet accepted may be, that the department of health regulations are more exacting and better heeded than in some of the other states and that it seemed therefore less necessary to add the factor of federal control to the routine of the private physicians which, to the public at least, may have appeared adequate in regard to their care of expectant mothers and women in childbed. As far as the "welfare of infancy" is concerned, the influence of the Bureau of Child Hygiene of the Health Department of New York City is so far-reaching that its benefits are counted to the credit of the entire state, although the fact is probably overlooked that infant mortality is fifteen points lower in New York City than in country districts.

There is also a possibility that so-called birth control has, in the last five years at least, since the United States entered the world war, become already effective in its influence to keep the number of children born in proportion below the number born previous to that period. (To avoid any possible misapprehension, we approve by no means of birth control, but about that later.) Merely for the sake of argument, the time being too short to judge, we will assume that, if the proposition of the promoters of birth control had noticeably met with the intended practical result, the better care which the smaller number of children would receive and the selected stock according to their postulate must contribute to reducing infant mortality.

Whatever may be its reason, the fact remains that the "Duell Bill" to accept the provisions of the Sheppard-Towner Maternity Law, as I am informed by the clerk of the Assembly Chamber at Albany, State of New

York, this year "died in the committee on Public Health."

The printed report from the Senate under Feb. 14, 1922 reads: Introduced by Mr. Duell . . . read twice and ordered printed, etc. . . . to be committed to the committee on public health: "The people of the State of New York, represented in Senate and Assembly, do enact as follows: Sec. 1. The State of New York hereby accepts the provisions of the act of congress, etc. . . . The State Commissioner of Health is hereby designated and constituted the agency of such state for the purpose of such act, with full power to cooperate with all federal authorities having powers or duties under such act, and to do and perform all things necessary to secure to the state the benefits of such act in the promotion of the welfare and hygiene of maternity and infancy therein. The state treasurer shall be the custodian of moneys apportioned to this state under the state commissioner of health, etc.

"Sec. 2. This act shall take effect immediately."

Before this bill was voted upon, several efforts were made publicly, which showed its popularity in the State of New York, and gave promise that it would be passed and become law. As an illustration may serve, a report by one of the New York daily papers, under date of March 10, 1922, which, omitting the headlines, reads under the title: Women Indorse Bill for Maternity Aid, etc.

"Proponents of maternity aid yesterday gave their unqualified indorsement to the Duell bill to make Federal Maternity operative in this state. . . . At a meeting in the Town Hall, under the auspices of the League of Women Voters, prominent speakers informed an audience of women that every legislator at Albany ought to vote cheerfully for the measure, which will place maternity and infancy work under state direction.

"All the speakers declared that the infant mortality rate could be reduced greatly if the State would undertake the work. It was said that virtually every women's organization has lined up solidly for the measure.

"Dr. Royal S. Copeland, Health Commissioner, called attention to statistics showing that six out of every thousand children were born cripples through haste and carelessness on the part of doctors. He gave his emphatic seal of approval to the bill. . . . Dr. Josephine Baker, Director of the Bureau of Child Hygiene of the Health Department, said that infant mortality was fifteen points lower in New York City than in country districts (in rural communities, public health nurses average fewer than one to 50,000 population.)

"Mrs. James Lees Laidlaw declared that, were it not for child-hygiene work in New York City, the state would be farther down

in the infant-mortality rate. She added that two-thirds of the babies who die in infancy, could be saved by proper attention."

Again, the Sheppard-Towner bill was given an opportunity of receiving national attention during the sessions of the business and professional women's Pan-American Conference at Baltimore, Md. There, according to a report under April 24th, 1922, a Boston lady, chairman of the Child Welfare Committee of the league, brought out these facts in the discussion of the opposition to the bill which then had crystallized in the refusal of Massachusetts and New York to make the required appropriations of \$85,000 each in order to make their shares of approximately \$75,000 each in the federal provision available to those states. Nine states, California, Louisiana, Maine, Massachusetts, Nevada, New York, Rhode Island, Tennessee and Washington had not yet taken the steps necessary to enable them to receive the benefits the act offers.

New York Provides Ample Prenatal Care

As many a law, or proposed law, presented to a legislature has been the outcome of measures employed or tested in private enterprise and activity, so has the essence of what is proposed to be made the public business of all the United States, in the protection of maternity and infant welfare, been the concern of competent private individuals trained professionally to fulfill the involved tasks. In the city of Greater New York, it seems hardly necessary to make such activities dependent on a federal law, so plentiful are today the private agencies for maternity and child welfare, the "maternity centers, prenatal clinics, health centers, etc.," all supported by private funds—but all constantly in need of more funds, so that state appropriations would at least be welcome, perhaps even adequate. Here, no doubt, the work intended by the law under consideration is being liberally and generously done and could hardly be done better. New York's example cannot fail to incite other communities in the state to imitation. And it is much the same in Boston and in the state of Massachusetts.

How "prenatal" work on a large scale sprung first from the imagination of the present writer on the plan of a private enterprise, may be shown here by a few dates.

The Maternity Aid

Twenty-five years ago, before there was any thought of the necessity of examining, as to their qualifications, women who held forth as "midwives," and when any woman—as in ancient history—was permitted to advertise her-

self in the newspapers as midwife, prospective mothers received no consideration whatever by the health authorities and, unless they were under the care of competent physicians, never knew into what hands they might fall when the day came that they were "taken sick," i. e. in the throes of labor. Although, even twenty years ago, the instruction of medical students in obstetrics was very inadequate, in this country, the incompetent midwife was as much rampant as the licensed physician untrained in midwifery, and the result was a mortality of women in childbirth in forbidding numbers. Many of those who survived remained physically disabled, the victims to traumatism and of puerperal disease, due to ignorance and neglect of aseptic technic. Of course, much mischief was wrought also through criminal practices with their evils of concealment, etc. So, it was high time that legal control of the midwife should be seriously considered.

In New York, in 1904, the present writer, Dr. E. H. Pirkner, aroused attention to this situation through a circular letter mailed to about 3,000 licensed physicians of Greater New York, emphasizing the necessity of sending nurses or medical students to visit women as soon as found pregnant and to instruct and prepare them for motherhood and advise them to pay monthly installments toward the doctor's fee so that competent assistance would be ready for their days of trial, with all expenses paid. This proposed reform was tested by the writer as to its practicability by a private enterprise called by him the "Maternity Aid," combining with its work instruction in practical obstetrics and infant care. It gave the foundation to the maternity centers now well established in several large cities. They carry out the plan in the sense of the federal maternity law of placing into the hands of expert obstetricians and well-trained nurses the prenatal and postnatal instruction necessary to the women meeting with their first experience of motherhood, and useful to those women who, mothers before, have not had the advantages of being visited and taught by public-health nurses under supervision of the clinic doctors, because they accepted the inconveniences of pregnancy as a matter of course instead of obviating them in time by attention to details understood only by medical persons.

June 6th, 1907, the State of New York established an Act "regulating and restraining the practice of midwifery in the City of New York," one of its requirements being presentation of a "diploma or certificate showing that she is a graduate of a school for midwives reg-

istered by the Board of Health as maintaining a satisfactory standard of preparation, instruction and course of study." Now, this is only a feeble beginning and tells nothing for the rest of the country; there are many counties in which registration of birth is almost unknown and can never be relied upon. Vital statistics are still grossly neglected in the United States.

The Bureau of Child Hygiene

Also, in New York City, in 1908, the Bureau of Child Hygiene was organized. Regarding it, its founder and director, Dr. S. Josephine Baker, under date of November 16th, 1922, writes as follows: "It was the first bureau of the kind to be created in this or any other country for this purpose, to prevent disease and improve the health of the children of all ages insofar as a municipality could carry on such work. For many years, it was the only bureau of the kind carried on under government auspices; but, in 1911, the New York State Department of Health organized a similar bureau and, shortly thereafter, the Children's Bureau, Washington, D. C., was created, and from that time on other states and cities have taken up the work, until now the latest figures are that 44 states have bureaus of child hygiene and practically every city or town of importance in the country is similarly equipped. The Bureau of Child Hygiene of New York City's functions include:

- 1.—Supervision and control of midwives;
- 2.—Reduction of infant mortality by means of
 - (1) Prenatal instruction of mothers
 - (2) Establishment of baby health stations
 - (3) Little Mothers' Leagues
 - (4) Educational propaganda;
- 3.—Supervision of foundling babies placed out to board;
- 4.—Physical examination of children of pre-school age;
- 5.—Supervision of day nurseries and institutions for dependent children;
- 6.—Health supervision and health inspection of school children, including maintenance of dental clinics, refraction clinics, clinics for treatment of contagious eye diseases and supervision of special classes for crippled, partially-sighted and other handicapped children;
- 7.—Physical examination of children in connection with issuance of employment certificates, in accordance with the provisions of the Child Labor Law.

The Latest Reaction

When the writer, in 1904, threw the stone into the water by his circular letter and, in 1909, after publishing his experiences in an article contributed to *American Medicine*¹ was invited to address a meeting of the New York State Charity Organization, the ripple which appeared on the surface exhausted itself in his private enterprise of giving protection to prospective mothers, including those who had ignored the social conventions and had merely yielded to nature's call. The stir, however, had left a sufficient impetus to make ever widening circles appear which, reaching shore, caused a lasting impression. After the licensing of midwives, a vigorous campaign was initiated by the County Medical Societies which forced the daily papers of New York to discontinue advertising for criminal purposes. Finally, only the recommendation of "contraceptives" under the ban of the law remained as a blur on the surface which propaganda is striving in vain to smooth out by a proposed law, the "birth control."

Birth Control Criticized

In its beginning, the movement started by Mrs. M. Sanger, R. N., was well intended, seeking a practicable way of creating the most favorable conditions for an improved human stock. Only her reasoning is sophistic and the very slogan which the proponents of birth control wrote on their banner assumed an infelicitous form bound to arouse antagonism. Birth control? Does not the very term arouse in the casual hearer (before he forms a conception of its supposed meaning) a feeling of aversion as from an interference with his natural rights? The first thought which occurs: Birth must not be allowed its course. Can you, unpunished, disturb nature when engaged in the performance of one of her most vital functions, a function which it has taken millions of years to bring to its highest perfection, when in the crucible of time countless individuals and generations have been ground up to atoms, macerated and re-formed in order to elaborate an ever-improving form as nature's final aim? Puny man or woman cannot interfere without inviting baneful consequences.

Birth control is licensed lewdness. The only control, natural and efficient, is self-control, the deliberate control in the sexual relations, such as Malthus originally recommended as the remedy of a supposed numerical preponderance of population over the possible food supply.

It is a physiological law that all the func-

tions which serve the preservation of the individual (self-preservation) and also those governing the preservation of the race (propagation) are accompanied by pleasurable feelings which must not be diverted, curtailed or interfered with. If such is done, nature seeks revenge. Remember how angry a dog may become, how he growls when you disturb or interrupt him while he is eating. We know of many sexual equivalents which set ideal satisfaction in place of physical indulgence, for instance through the presentations of the arts. And, so, a performing musician, as much as his audience, resents being interrupted by anyone or anything; their natural instinct is hurt by any attempts to divert them from their absorption.

Again another ring of the successive circles to reach shore, was my proposition of a law (and it seems to me of paramount importance) to make "notification of pregnancy compulsory" for physicians and midwives; the women themselves to notify the health authorities as soon as pregnancy is detected. My article on this subject was published by *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*, March, 1918. My original proposition, to place all pregnant women under official observation, had been approved in 1910 by the Medico-Legal Society of New York.

Now, the last circle vibrating on the clearing waters is again "Maternity Aid." Automatically, this term has found acceptance.

In conclusion, I quote the remarks of Narcissa Cox Vanderlip, chairman, New York State League of Women Voters: "Federal midwifery, during the war, we thought, was a matter of national defense to have strong, healthy men and women. The welfare provisions of the federal constitution cover stranger creatures than babies. If it is constitutional to use federal funds to save hogs from cholera and cows from tuberculosis, it is constitutional to use them to save babies and mothers from death."

In the immortal words: "It is a condition, not a theory that confronts us." The babies and mothers are dying at a rate no other civilized country permits. The localities do not know how to save them and have not the money to save them. The Sheppard-Towner law makes it possible to bring them this help.

¹ An editorial in *CLINICAL MEDICINE* (Oct. '22, p. 716), refers to this petition before the Supreme Court of the United States.

² The Problem of Race Suicide, a problem of national hygiene and prophylaxis rather than of Political Economy. *American Medicine*, New York, August, 1909.

Surgical Seminar

Conducted by GUSTAVUS M. BLECH.

Solution of Surgical Problem No. 7

RECAPITULATION of the Problem.—

You are called to see a young woman, who, for two days past, has suffered intensely from "inflammatory rheumatism" of the left elbow. The patient obtains no relief from an opiate. The joint is red, hot and swollen, and any attempt on your part to palpate the affected region causes the patient to cry out in great agony. The patient generally appears to be very ill and exhausted, with a pulse of 100 and a temperature of 102° F.

The requirement in the problem calls for an exact diagnosis and a non-operative therapy by which speedy relief and eventual recovery is assured.

Note.—Before presenting the following solutions, it is a great pleasure to me to be able to announce still greater manifestation of interest in the Seminar than shown heretofore, through the fact that I have before me at least forty correct answers or solutions, about ten replies which are best classified as non-committal, while a very few gave an incomplete or, as the writers themselves term it, "doubtful" diagnosis.

I have had some difficulty in the classification, as can be seen by the following partial quotation of one letter of the last class:

The diagnosis is almost self-evident from the description—that of arthritis. How else can such a case be diagnosed offhand, without there being time and means for a more scientific investigation? This woman may have scratched herself with a dirty finger nail or in some similar way have acquired a streptococcus infection. A wide incision without delay, followed by antiseptic compresses, is the treatment vitally indicated.

Not so, my good brother! How often must I repeat that there would be no Seminar at all if we selected for discussion cases which afford us the means and leisure of thorough and prolonged scientific investigation? A cynic may call me to account and quote the famous Rokitsansky, who is alleged to have asserted that no diagnosis is scientifically complete and of value until it is accompanied by a report of the postmortem findings; but I believe such ultrascientific viewpoints are getting less popular "day by day" in this

glorious country where we are not accustomed to kneel in humility before the mighty, even in science.

And, so, we come back to reality. The fact is, that you are in a house late in the evening and the patient—by the way a poor domestic—suffers much, and you are really called upon to produce results. Of course, you can send the patient to the hospital, if there happens to be one in town, and gain a little time and change of surroundings, so that you are not exposed to the interested gaze of the people in the house. But, just the same, that is not the proper solution of the problem presented for the present.

I have purposely called attention to the fact that an opiate has failed. My object was, to avoid any further discussion as regards resort to the hypodermic needle. In fact, I may say that the hypodermic syringe should be carried for entirely different purposes and used for the administration of an opiate only in exceptional cases.

If any one should raise any objection to this statement, I am going to ask Brother Candler to come to my rescue; for, I do not pretend to be an internist. Nevertheless, I have had my obstetrical forceps replated several times and had worn out a few medicine cases before I dared announce myself to the profession as a surgeon. So, I am not altogether a mere sawbones and I refuse to be muzzled even in internal problems.

To come back to our subject, the diagnosis "arthritis" is meaningless. I have said as much when I said that the elbow was hot, red and swollen. If there had been any visible or revealed source to justify the assumption of a streptococcus infection, I should have said so. Accordingly, the proposed treatment can be dismissed as harsh and irrational. Besides, the "requirement" does not call for operative therapy.

Three Opinions

Now, let us all meet in consultation. I have selected the three best contributions, though I must confess that so many good ones have come in that I had a hard time deciding upon

them. After that, I will presume, by the divine right of possession of the tripod, to sum up the evidence.

Colonel George Acheson, of Kingston, N. B., our loyal collaborator of this department, presents the following scholarly discussion:

The symptoms, as detailed, point only to some acute inflammatory condition in or around the left elbow joint; but the data are not sufficient to permit of an exact diagnosis.

There are a number of pathological conditions which occur to one as possible explanations of the *status praesens*, e. g., acute bursitis, acute inflammatory rheumatism, synovitis, and arthritis, infective, or non-infective.

The recent medical history of this patient should be inquired into, and would probably throw considerable light on the case. Has there been any injury to the elbow, such as might result from a blow or fall, or anything in her employment necessitating long-continued pressure on the olecranon? If so, this might point to a condition analogous to "housemaid's knee"—an acute non-infective bursitis; or, if the local signs indicate a suppurative process, to acute infective bursitis.

Again, if there is a history of sore throat, and, especially, if there has been any complaint of pain in any of the other joints, rheumatism may be strongly suspected. Here, one would expect considerable sweating, with the reaction of saliva, sweat and urine strongly acid.

If there is a history of sprain, we may have a simple traumatic synovitis to deal with. Of the forms of synovitis due directly or indirectly to microbic infection, excluding tuberculous inflammation, we might have a syphilitic, gonorrheal or septic case. Here, too, the history would point to the causative factor.

Before committing myself to any positive diagnosis, I would, after careful inquiry into the patient's recent history, look for some evidence of rheumatic, syphilitic, gonorrheal or other septic infection, and for any history of sprain or other trauma. If there is any fluid present about the joint, its nature could be determined by an exploring needle.

Immediate Therapy.—If pus be found, the case is one for operative surgery. In the absence of any sign of suppuration, I should apply lead-and-opium lotion, cold; order complete rest for the limb; give 10 grains of cinchophen, with 15 grains of sodium bicarbonate, in a large draught of water, every two hours until effect; and, in any case, secure free evacuation of the bowels by salines.

Dr. Isaac E. Crack, of Hamilton, Ontario, our equally esteemed collaborator, properly adjusts his diagnostic compass for orientation as follows:

Re diagnostic problem No. 7: We have here an arthritis of infective origin (not rheumatism). Before giving a positive opinion, I consider it necessary to know whether the patient has a urethritis, for this case very

strongly points to a gonorrheal arthritis. But, I would also bear in mind focal infection elsewhere. The probability of osteomyelitis must not be lost sight of.

Treatment.—Put the arm at rest and apply a saturated solution of magnesium sulphate with equal parts of alcohol and lead water. The acute stage is likely to subside in a short time. Then, Bier's hyperemia will probably assist in bringing about a cure. Constriction like this should be watched very carefully. If osteomyelitis is present, early surgery is indicated.

Dr. L. B. Gray, of Bay Shore, N. Y., a newcomer to this department, is introduced to the readers without any other comment except to say that I sincerely hope he, too, will become a collaborator through his regular contributions. His comment on the problem speaks for itself:

Surgical Problem No. 7, brings to my mind the following: Like the tent of a three-ring-circus, rheumatism covers a lot of things. As the young lady is not Caesar's wife, she may have been attacked by the insidious and omnipresent gonococcus.

The first thing that the patient, employer and solicitous (meddlesome?) friends want is—rest. Diagnosis and treatment in full, later. For the night, I should advise (either by mouth or hypodermic injection) one dose of Hyoscine-Morphine-Cactoid, to be repeated in three or four hours, if needed. Wrap up the entire arm in cotton to keep it warm, adjust it to a comfortable position on a pillow and apply a warm—not hot—water bottle.

The next morning, I should endeavor to get the lady's confidence, and see whether I could induce her to admit a recent attack of vaginitis or Bartholinitis. I should make a white-blood-corpuscle count and examine the bursal areas of her elbow. I should also take a vaginal smear and order an x-ray.

As for treatment, I should suggest light diet, absolute rest in bed, salicylates or derivatives until result is obtained. Radiant energy, as typified by a baking light, and mixed vaccines suggest themselves as of great value. The (hypothetical) vaginal condition should have careful attention.

Comment

I feel a good deal like a fifth wheel to the wagon today. The three gentlemen have said all there should be said on the subject. My comment must be restricted, therefore, to the frame of the requirement, as given with the problem.

Now, as a matter of fact, I have not selected a hypothetical but an actual case, and, what is more, I have seen so many similar ones, that I hesitated somewhat to select this class of arthritis as a suitable subject for discussion. But the discussions themselves have convinced me that I have chosen better than I dreamt.

Now, my previous experience has been such that, when we have an inflamed joint, which is so painful that the least touch causes the patients to betray agonizing pain and tenderness, there is, to my mind, no question that we have a metastatic infection produced by (as Brother Gray describes it) the "insidious and omnipresent" gonococcus. I know of no other microbe that produces such exquisite tenderness, not even the justly dreaded streptococcus. I think, in my life I have seen the worst possible cases of streptococcus infection; I have seen the patients die despite extensive and deep incisions and constitutional treatment. Yet, I do not recall one who would not allow me to make an examination of the joint or joints affected and cry out in agony. The explanation for this may be interesting from a theoretic point of view, but we are interested in the practical only—at least in a seminar.

The Diagnosis

With this experience as a guide, the diagnosis is not difficult even at first glance. Of course, in the presence of company, it will not do to ask the patient: "Madam, when have you had the clap?" for more reasons than one. I should not even ask her at that time whether she had ever felt a sensation of burning on urination. For, in the first place, the question may lead to nowhere and, in the second place, the dignified employer herself may recall a somewhat similar experience, years since, soon after she was married, and it might awaken her to a realization that her domestic had loved too well though not wisely.

In the event that you have to deal with a recently married matron, a little talk of the "Hell and Maria" variety with the husband, in a separate room, will clinch the diagnosis. In the case as given, I did just what Dr. Gray suggested, I waited until I had her in the hospital and then obtained sufficient evidence to make interrogation superfluous. But I talked freely over the protest of the poor girl that she was a single woman. I replied that I was a rationalist and that church ceremonials are not accepted as etiologic factors, nor does their absence exclude them. And, then came the usual feminine answer in the form of a lachrymal shower.

The Treatment

Now, when I asked for a non-operative treatment that had the promise of bringing about speedy relief and an eventual cure, I had in mind Bier's passive or, as it is also called, constriction hyperemia. This can be

produced with an ordinary soft rubber bandage. Assuming that the right degree of constriction has been found, the relief should be instantaneous, and so much so that, ten minutes later, the patient will allow you to flex the joint without crying out, provided, of course, that the manipulations are done in a gentle manner. I have seen our patient's employer gasp in astonishment, when I demonstrated what a simple bandage can do. I have seen others; and only very recently I demonstrated to my assistant and to a number of physicians, in a similar case in a young man, that I could extend and flex the right elbow afflicted with an acute gonococcal synovitis when, but a few minutes before, the merest touch of the affected joint would cause him to grit his teeth in agony.

In the hospital, where these treatments are administered three or four times daily and the applications are to last for about half an hour, I think the use of a blood-pressure apparatus to be far better than the simple rubber bandage, since either the nurse or the patient can adjust the cuff to the right degree by watching the needle-indicator. That is to say, the needle must be at the point which by previous experiment has been found to indicate the proper degree of constriction. A bandage applied too loosely will accomplish nothing, and one applied too tightly will do harm.

I am so confident of the value of passive hyperemia that, if no relief is obtained from the first application (assuming, of course, that the proper degree of constriction has been applied), I question the correctness of a diagnosis of gonococcal arthritis or synovitis. Even if evidence of a gonococcal urethritis or colpourethritis be present (and that is often the case and misleading) I look upon the two as separate affections which have nothing in common. In other words a patient may have clap and an arthritis of different origin. But, I repeat again, that then the sensitiveness of the affected joint should not be so pronounced.

It is beyond the scope of the requirement to discuss any causative therapy, but I do not desire to be misunderstood that the constriction cures also the focal infection. That must be looked after as soon as circumstances permit.

Surgical Problem No. 9

The following problem is kindly presented by Dr. Isaac E. Crack, 970 King Street, East, Hamilton, Ontario (Canada), and it is requested that participants in the discussion send

in their contributions as early as possible, as it may be necessary for the Editor to communicate with the author for special comment.

A woman, aged 61, has always been in good health. On Wednesday, January 10, she was suddenly seized with severe abdominal pain and vomiting. The bowels had not moved for three days, which was very unusual. Pulse and temperature undisturbed. All medicines were vomited; but, relief followed shortly after evacuation of the bowels produced by enemas.

The patient remained well until Friday, when she was again seized with abdominal pain but without vomiting. Temperature 99° F., pulse 100, at 7 p. m. Examination of the abdomen showed tenderness and a mass in the lower abdomen comparable to a pregnant uterus at about the sixth month. Examination per vaginam shows the uterus to be normal, but a large mass can be felt posterior to the uterus, fairly hard and tender. At 10 p. m., the same evening, the temperature is 99° F. and the pulse 116 with a leucocyte count of 5000.

Required: Diagnosis and treatment.

SCOLDING THE PHYSICIAN

Recently, we had a good deal of correspondence with various physician friends concerning the many difficulties that confront physicians as a class and with regard to the etiology, diagnosis and treatment of these difficulties. One of our friends wrote a letter that contains so many true things that we feel constrained to reproduce it in the following. It is not exactly pleasant reading. It tells too many disagreeable home truths. Nevertheless, we should take it to heart and should, all of us, awaken from the fatuous nonactivity, the *laissez faire* attitude that has beset us for altogether too long a time. The letter follows:

"The medical schools today are not producing men for general practice. Young graduates know about five remedies to use. Do you ever see information in some of the very topmost medical journals that is of benefit in treating any patient who consults you? Can you name one drug in the *Pharmacopoeia* which would help you in treating a case of Bright's disease? Have we a clinician today who can measure up to Widal, Babinski or Gilbert? Have we a work on therapeutics which can compare to Ringer's? (How many physicians have stolen their material from Ringer?) Have we a set of textbooks on clinical medicine which would compare with Trousseau's, printed in 1859? Have we a Benjamin Rush today?

"Sir James Mackenzie is doing the kind of work I wish to see others do and there is no reason why physicians should not do it. The only thing which prevents others from doing it is, *Laziness, pure and simple*. Medical men have become the most conceited class there is; they believe they know everything and do not need to study. In — — —, there is an excellent medical library with a fine lot of medical journals. I have never seen a doctor there reading. We live in an age of laziness, physical, moral and intellectual. Doctors will not keep up with the times; they have become hard and critical and disseminate little hope in the sick room. The laziness has become so pronounced that a physician will not make a diagnosis with a stethoscope, but must have an x-ray diagnosis for tuberculosis, and even for pneumonia.

"I have been in Widal's clinic and have seen him spend an hour studying one case. He had no laboratory tests made, not even a blood-pressure test. When he had finished, I wish that I could have known as much about the patient as he did. I should have fumbled over my books and after many tests been so far at sea as when I started . . . like Oliver Wendell Holmes, who said that the old woman who knew how to make a poultice, when to make it, and where to apply it, was of more use than the pathologist, who, after his laboratory tests were completed, went home and fumbled his books, and knew nothing when he ended.

"To show you what the laboratory sometimes will do for a patient, a few days ago, a man of fifty-six came to me; he had been the rounds of specialists, with no results. Each man he went to made a test of the spinal fluid, the last one sent the fluid to three laboratories. Each one showed a negative Wassermann and, as usual, the old man was told to go to work. I may add, parenthetically that, notwithstanding the number of doctors he has been to, he still has his teeth! There are very few sick people today who can say that. He was an expert machinist but had not worked for eight years because of one symptom, vertigo. He gave a history of syphilis thirty years ago and has a little scar on his penis which makes us believe that he is not trying to deceive us about it! He had little treatment at the time of infection. Since the Wassermann was negative, what should be done? I gave him some tablets of red iodide of mercury and, in two weeks, he was free from vertigo and was able to return to work. I will not tell this result to many, because I will get the same response: *Couéism!* or something else to remind me that Nature did the work and not a mere drug."

In a later letter, the same correspondent has the following to say:

"It is high time to find someone on the constructive side of medicine. We have had enough of autocratic medicine. It is also high time to get out of this physical, mental and moral laziness. Why should physicians depend upon others to do their thinking? Dig

[Continued on page 208]

The General Practitioner

Talks About Professional and Personal Problems

Conducted by WM. RITTENHOUSE.

Happiness

The happiness of your life depends upon the quality of your thoughts.—Marcus Aurelius.

WE all desire happiness; we regard it as the most desirable thing in life; we think we know what it is; but, if we were to ask a score of persons to define it, we should probably get nearly a score of different answers. If we consult the dictionaries or the philosophers of literature, we find a similar variation of opinion.

One writer defines it as: "The pleasurable experience that springs from the possession of good, from the gratification of the desires, or from relief from pain or evil."

Most of us have lived long enough to learn that the gratification of the desires does not always bring happiness, but very often proves disappointing; like the fabled dead-sea fruit which is fair to the eye, but within is naught but ashes. Most of us think, we should be happy if we were rich, but the possessors of wealth, especially of great wealth, are often far from happy.

Another describes happiness as: "A state of being, more or less permanent, in which is experienced a large measure or the full complement of satisfaction, especially of the higher intellectual and moral kinds."

This writer has evidently reflected much. His proviso "more or less permanent" shows that he has observed the uncertain and transitory nature of what people regard as happiness; and he has also laid hold of the great truth that the true basis of happiness is in the intellectual and moral realm.

Another author says: "Happiness is the complement of all the pleasures of which we are susceptible"; and still another, "A condition in which pleasure predominates over pain or evil."

These last seem to put rather much stress upon pleasure. We see people whose lives are given over to pleasure, and who yet are far

from happy; while, on the other hand, we see those who have little of what is called pleasure, and yet are reasonably happy. They are generally persons who have come through affliction and suffering, and have schooled themselves to bear them philosophically, looking beyond the present, and perhaps supported by the consolations of religion. For, whatever the materialist may think of religion, the fact is indisputable that millions find it a source of happiness.

In the classics of English Literature, we find many references to the subject in its various aspects, according to the viewpoint of the writers.

Thomson in the *Castle of Indolence* says: "Health is the vital principle of bliss."

Hosea Ballou says: "Real happiness is cheap enough, yet how dearly we pay for its counterfeit."

Madame de Stael, in one place: "One cannot be fully happy till after his sixtieth year"; and in another, "Be happy, but be so by piety." Evidently the opinion of her later years.

Bovee asserts: "The greatest happiness comes from the greatest activity."

Barry Cornwall exclaims: "Oh, why has happiness so short a stay?"

Goethe asks: "Who is the happiest of men?" and then answers his own question: "He who values the merits of others, and in their pleasure takes joy even as though 'twere his own."

In Goldsmith's "Traveller" we read:

"Still to ourselves in every place consigned,
Our own felicity we make or find."

Longfellow in "The Golden Legend" has:

"To be strong is to be happy."
In his much quoted "Essay on Man," Pope

has the stately lines:

"Fixed to no spot is happiness sincere;
'Tis nowhere to be found, or everywhere;

'Tis never to be bought but always free,
And fled from monarchs, dwells with thee."

The genial Sydney Smith (not the creator of *The Gumps*) thus philosophizes:

"Mankind are always happier for having been happy; so that, if you make them happy now, you make them happy twenty years hence by the memory of it."

From Young's "Night Thoughts": "True happiness ne'er entered at an eye; it resides in things unseen."

Obstacles to Happiness

Of these, the greatest is unquestionably fear, commonly called worry. It hangs like a dark cloud over the lives of the vast majority of the human race. It spreads its nefast pall over us even in childhood. Even the infant fears strangers or perhaps unfamiliar noises. As a child, I suffered untold terrors from many things. I was afraid of the dark, of thunder, of ghosts, of war, even a large body of water, such as a lake or an ocean, filled me with a vague, inexplicable terror. This may have been due to hearing stories of drowning. The stories of older people are responsible for most of childhood's fears. After listening to stories of ghosts, or of haunted houses, it is no wonder that a child is in terror of the dark. So thoroughly were those terrors ingrained into my childhood's mind that, even when I was nearly grown up, I could not pass a grave yard at night without a nervous tremor of fear, and my dreams were full of ghosts, and wars, and all sorts of uncanny things, even visions of death and hell. The latter were due to the kind of religious teaching I had. Grown people who tell ghost stories or preach hell in the hearing of children are guilty of the most brutal cruelty. Children are not naturally afraid of the dark. Unless they have had their imaginations abused by older people, they do not fear it. Even thunder and lightning can be presented to a child's mind in such a manner as to rob them of their terrors. We were taught that thunder is the voice of God, and that we were liable to be struck dead if we laughed or played or showed any sort of levity during a thunderstorm.

Henry Ward Beecher was once asked whether he thought that the weather had any influence on a person's religion. He replied that he believed it did, because he had known many people who were good Christians during a thunderstorm. Remembering how much I had suffered from terror during storms, I resolved when I had children of my own that they should be spared that martyrdom if it was in my power. I taught them from the first that lightning was a beautiful display of fireworks, and that thunder was as sublime and grand as the thunder of Niagara Falls,

or any of nature's displays of power. When an electric storm came on, especially at night, we would sit by the windows and watch for the brilliant flashes, "fireworks" they called them. Seeing that I treated them as something beautiful, they never thought of associating them with fear. They classed them in the same category as rain or hail or any of nature's displays of power.

As we advance in life, the character and objects of our fears change, but they are ever with us. The mother fears for the welfare of her children. Sickness and death are always in the background to rob her of her treasures, or perhaps she fears the loss of her husband's affection, or his loss by the hand of death.

The man fears bankruptcy or the loss of his situation. Financial cares may oppress him and render his nights sleepless. He may be out of employment, or his health may be undermined, and he fears the day when he may see his loved ones in poverty, and be unable to help them.

Worry is the fear of what *may* happen, and we are very apt to forget that the things we fear seldom come to us. But, even if they do happen, it does not follow that we must be unhappy. We always find a way through our difficulties.

Misery Loves Company

We can usually see others who are worse off than ourselves, and we can congratulate ourselves on that fact. It is an old saying that "misery loves company," and it seems to be ingrained into human nature that, if we see others more unfortunate than we are, it makes our own troubles easier to bear. In comparing our own condition with that of others who are in worse case than ourselves, we are not indulging in selfish or unworthy comparison, although there are people who think so. Gratitude is not an unworthy sentiment, and, to feel grateful that we are in a better state than our neighbor, is perfectly consistent with sympathy for him and a desire to help him.

To congratulate ourselves that somebody else suffers more than we do, would be ignoble and unworthy. But, that is not what we do. What we really do is, to imagine that we might be in the same condition as they are, and to be thankful that we are not.

When I first became disabled, eight years ago, and realized that I would probably never walk again, I saw some pretty dark days. My philosophy was not quite equal all at once to

facing my fate with equanimity. An old minister, whose visits were always welcome because of the sunshine that he radiated wherever he went, said to me one day, on leaving: "Do not forget to count your blessings." After he was gone, I began to think what his meaning was. I felt at first that I had no blessings to count. But, the more I reflected, the more I could see that in many respects I might be worse off than I was. Gradually I came to see that happiness is largely a matter of attitude; in other words, the way we take things. It is in no spirit of egotism that I assert that the past eight years have averaged about as much happiness as any eight years of my life. If there are some things that are denied me, I devote myself to enjoying those that are within my reach and forgetting the others. None of us have all the good things we would like, but we generally have a fair proportion.

In childhood, we long for the time when we shall be grown up; we think that then we shall be happy. In adult life, we look back and think how happy and care-free we were in childhood. But we deceive ourselves; we have merely forgotten the troubles of childhood. True, they were troubles about trifles, but to the child they did not seem trifles—they were very real. I can vividly recall the unhappy frame of mind in which I went to school when I was seven years old. I had such a fear of the stern teacher, that I was more unhappy than I ever was in after life. Much of the unhappiness of childhood is entirely needless. A little less thoughtlessness on the part of older people would spare children much mental suffering.

The Golden Age

Individuals, as well as nations, look backwards to a Golden Age. But, though this tendency is practically universal, it is nevertheless an illusion. It is a benevolent dispensation of Providence that the memory of pleasant experiences lingers in the mind, while that of disagreeable things fades out; and so we think of the past as happy—a Golden Age.

The Golden Age is *today*. With all the world's turmoil, war, crime and misery of today, there is nevertheless more happiness and more opportunity for happiness than ever before. We have only to read history to find the proof of this assertion. Such conditions as prevail in Europe and Asia today are exceptional. Once they were the universal and constant condition of the race.

Anyone who wants to know the condition of the common people in medieval Europe,

should read Charles Reade's "The Cloister and the Hearth"; and he must have a singular mentality if he does not feel glad that he lives in the twentieth century instead of in the fifteenth. This book pictures the life of Europe in the Middle Ages in a manner more vivid and personal than most histories, many of which are so occupied with accounts of wars and the doings of kings that they fail to picture the life of the common people. You may say Reade's work is fiction, but the fiction consists only in the names and personages. The actual conditions of life there described are not fiction. There is plenty of reliable evidence of the hard conditions under which people lived then, and the farther back we go, the more miserable we find the condition of the common people.

Health has a profound influence upon one's happiness. Indigestion, a sluggish liver, the constipation habit, may throw a pall of gloom over one's spirits. Some persons inherit a tendency to melancholy and a pessimistic view of life. Even the weather affects some individuals, so that a cloudy, gloomy day causes depression.

Unfulfilled desire causes much unhappiness with those who are not philosophical enough to take a rational view of their disappointments. One man has set his heart on accumulating a fortune. Another has looked forward to the joy of having a home, founding a family, and leaving children to be the stay of his old age and perpetuate his name. Another has an ambition to be famous in his career, so that he may be a leader of men and leave an honored name behind him. These are all worthy desires and, yet, they may go unfulfilled and leave the individual who indulged in them embittered and disappointed.

Idleness is rarely consistent with happiness. True, there are some lazy individuals who experience a sort of animal satisfaction in their sloth, but it is not to be compared with that which comes from useful activity. In fact, work is the most wholesome thing in the world and, until we have learned that truth we are only partially civilized. The savage regards work as fit only for women, slaves and beasts of burden.

The man of wealth, who retires from business with the intention of devoting the rest of his life to pleasure, is seldom happy, although he has the means of gratifying every wish and whim. Such men are almost sure to become the victims of boredom in a very short time unless they have some substitute interest, such as scientific study or some hobby

to which they can transfer the interest which they formerly expended on business.

The Curse of Selfishness

Selfishness is a great bar to happiness. One writer says that, to live as if happiness were the chief object in life, is really a piece of selfishness. No doubt, this is in a manner true; our own gratification is not the highest motive we can have.

The thoroughly selfish individual dwarfs his own soul and diminishes his capacity for high and noble motives. He is a loser in three ways: 1st, he cannot always have his way and, in consequence, suffers disappointment; 2nd, he makes many enemies by his selfish actions, and their contempt cannot fail to react upon him unfavorably; and, 3rd, he is a stranger to the pleasure that comes to us when we make others happy. This is one of the highest and most enduring types of pleasure of which we are capable.

There is a kind of selfishness which renders the possessor most unhappy. It takes the form of a morbid self-consciousness. The individual is continually attributing wrong motives to the acts and words of others, and taking offense where none was intended. I know a lady who is in most respects a very worthy woman; but she has been thinking of herself until she has become morbid on the subject. An absent-minded friend passes her without speaking, and she at once concludes that her friend has cut her. Nothing will convince her to the contrary. Or a friend makes a remark that she construes as a slur. People who are looking for slights are sure to find them or what they consider as such. These supersensitive persons are unhappy most of the time, and on purely imaginary grounds. They need to root out self-consciousness as they would weeds in a garden; and they must learn to give others credit for good intentions. Above all, they need to devote themselves to acts of kindness to others, and thus forget themselves.

To Be Happy

In the first place, stop chasing happiness. The historian Froude remarks: "To be happy, is not the purpose for which you are placed in this world." His meaning evidently is that, to make the pursuit of happiness our sole aim, is really a form of selfishness. There are other things that are more worthy of our efforts than self-enjoyment. When we stop living for happiness, she comes to us unsought. Like a shy maiden, woo her, and she flees us, but stop pursuing her and she comes to us of her own accord.

In enumerating the greatest and best means of promoting our own happiness, I am inclined to give the first place to work—honest, useful, congenial work. It occupies our minds in a wholesome manner and, when we do our work conscientiously, we enjoy a satisfaction that nothing else can give. We like to do the things that we can do well.

In the second place, I should put: "Banish fear." Stop worrying. Cultivate optimism and contentment. Let the mind dwell on the things that are favorable in your surroundings; you can always find some. Do not dwell on the misfortunes that *may* happen. Ten to one they will not. If they do not, you have saved some useless worry. If they do, you have at least saved advance worry and cheated fate to that extent. Remember, everything can be cultivated. The more we look on the bright side, the easier it becomes, till at last it becomes automatic. And, what person in all the world needs a bright, cheerful, joy-radiating mentality more than the doctor? It increases his power many fold.

Another fruitful source of happiness, which some would put first and which perhaps should have been put first, is giving happiness to others. Making others happy is one of the surest ways of being happy ourselves. Observe how, at Christmas time, everybody tries to make others, especially the children, happy; and, in seeing their joy, who is so stolid as not to respond to the joy of giving pleasure!

In our everyday life, we have constant opportunities of helping others, of showing them some little kindness, even if it is only to be cheerful and pleasant towards them. Courtesy begets courtesy, and it is an admirable smoother of the roughness of the road in our daily intercourse with the world.

Perhaps no writer has ever surpassed Charles Dickens in the skill with which he pictured the attractiveness of a kindly, genial, beautiful personality. Such characters as Agnes in "David Copperfield," or the Cheeryble brothers in "Nicholas Nickleby," or Florence in "Domby & Son," are masterpieces of the word-painters' art. The great novelist, in writing, his "Christmas Carol" and there drawing his immortal portrait of Scrooge, first in his selfishness, and then in his changed nature, has given the world a sermon that perhaps has never been equalled, from any pulpit. It has been read and re-read with pleasure by millions, and will be read by millions more to the end of time. Lord Jeffrey assured the author that he had "done more good, and

not only fostered more kindly feelings, but prompted more positive acts of benevolence, than can be traced to all the pulpits and confessionals since Christmas, 1842." ("The Christmas Carol" was written in 1842.)

Lastly, a means of happiness is religion. I am aware that here I am on delicate ground. But, every person has some sort of belief, and each one should select that form which he thinks will promote his happiness best. It seems to me a self-evident duty for each one to adopt some sort of views on the subject of his relations to his fellow man, to his Maker and to a future life. Those views may be imperfect, but they are better than none; provided that they are held honestly and with an open mind. The one who believes that this life is a preparation for another life of greater usefulness, and consequently of greater enjoyment, has a source of happiness that is lacking to the materialist. When John Burroughs was dying, he expressed his absence of belief in anything beyond this life. I am not saying whether he was right or wrong, but I cannot help thinking that his last years would have been fuller and richer and happier if he had had the conviction that ahead of him lay, not a blank, but a field of greater and grander opportunities of service and happiness than he had in this life.

[Continued from page 203]

up the older practitioners and let them tell us a few of their experiences, how they dealt with certain diseases without the help of a group diagnosis. They did not have the advantage of nurses, assistants, laboratories, etc., but were forced to relieve a patient because there was no alternative.

"The great necessity, today, is to make the general practitioner become more efficient, to make him able to compete with specialists. I know you will succeed in stimulating the profession to do better work, to take post-graduate courses, get up-to-date equipment, have their own laboratories and do their own laboratory work. Considering the Aloe plan of partial payments, there is no excuse for any doctor not to have a good equipment.

"The first thing to do is, to have a house cleaning. Make the office clean and acceptable. Get rid of out-of-date books, except the good ones, revise the library, have instrument cabinets, sterilizers, a sphygmomanometer on the wall, a microscope, laboratory, treatment apparatus, x-ray, high frequency apparatus, electrodiagnosis instruments, etc. How can a man be progressive in a filthy office? Why don't you start a cleaning-up month amongst the profession, get the cobwebs out, as it were, and, when the cleaning is over, let the doctor go to a first-class tailor and end with a manicurist. The profession needs a little manicuring. They need to get out of

this physical, moral and mental rut. After all, what makes a great man except success? People love to go to a successful and busy man; they will not go into an office which is empty. No one enjoys going to a man who is not progressive. All great physicians are well dressed and look prosperous.

"In looking around at many medical meetings, one might think that it was a gathering of horse-traders, judging from their hair, clothes and shoes. A friend of mine, in the A. E. F., was always so particular about his dress. During an air raid in Paris, he would shine his shoes. I called upon him and was astonished at his office; it was filthy; old shoes under the examining table, filthy floor and walls and a spittoon on the floor. The same old thing; anything will do in medicine. But, it will not."

No doubt our good friend (and your good friend, too!) felt much better after this mental catharsis. The fact that he overstates matters in some respects does not detract from the basic truth of his position. Regarding his charge that physicians no longer study, we must protest, at least to a certain extent. We know that many, very many physicians, in city and country, are hard students. Here in Chicago, in the beautiful Nicholas Senn reading room of the John Crerar Library, one may always find numerous physicians reading and studying. We are constantly asked for advice as to suitable books on general and special subjects.

Reversely, it is also true that the frequent excuse of "No time to read; too busy!" is simply a convenient alibi, if not a very good one. Much time is frittered away on useless fussing and trashy reading, during working hours that should be devoted to study, to reading and to laboratory work. Leisure reading should be done in leisure hours; not during office hours.

We are glad that our correspondent has corrected the impression conveyed in his first letter that he holds laboratory investigations and instruments of precision but lightly. His second letter shows that such an impression would be a mistaken one. Nevertheless, he is right: The careful study of the patient, the finding out of what our eyes and ears and hands can discover, will prove highly informative. The results of such detailed and painstaking search may then usefully be supplemented by laboratory examinations, by blood pressure readings, x-ray examinations, and all the rest of it.

The lesson, we take it, is just this: Just because we belong to the medical profession, does not entitle us to rest on any imaginary oars and be pleased with the wonderful prog-

[Continued on page 219]

Good Medicine

Let us learn as we go, but not forget what we know

Conducted by GEORGE H. CANDLER.

Bolivar Blaas

PERMIT me to introduce for your edification, Zion, Ill., the *Leaves of Healing*, and Wilbur Glenn Voliva (not BOLIVAR—he was the big elephant in Barnum's circus and a decent kind of pachyderm), Chief Zip-Zip of Zion ever since the late lamented John Alexander Dowie, of scented memory, went "Zowie" (and "West") among distinctly non-apostolic surroundings.—R. I. P.

Not a single one of these items would be worth discussing, were it not for the fact that Voliva—Zip-Zip of Zion and Editor of *Leaves*,—either of his own free will or instigated thereto by "sinister influences," has been circulating from house to house, in the City of Chicago and elsewhere in said County of Cook, State of Illinois, copies of *Leaves of Healing* which contain very much offensive and entirely misleading matter touching upon and appertaining to the "dirty doctors" and their horrific habit of "going around putting their filthy rotten cowpox virus into the pure, sweet little children." Because this particular edition of *Leaves of Healing* is entirely devoted to vilification of the Doctor; because it states that the time, has come to "*down the dirty doctors and drive vaccination back to hell where it came from,*" and because small boys are stepping to my door and your door and handing in this monstrous mélange of misinformation with the saintly salutation, "Peace be to all in this house," it seems desirable to breathe a few gently-worded protests, before people generally get the idea that we really are what—from a score of interested sources—we are being represented to be.

Concerted Attacks on Doctors

For some reason or other, these attacks are concerted and becoming decidedly concentrated, and one wonders who's paying the bill? Ordinary "antivaccinationists" we have had with us always and, if I remember rightly, Moses had to deal with just such individuals when he lifted up the Serpent in the Wilderness, that those who looked thereon might

live. We don't object to these well-meaning but imperfectly informed bipeds—unless they become a menace to others; neither do we have any objection whatever to hearing "ex-surgeons," "noted authors," or even 'Smith, Brown and Jones, M.D., express the opinion that vaccination is tommy-rot and a procedure (in their opinion) to be unreservedly condemned. Indeed, if some of these intellectual and well-informed gentlemen (who probably never saw a case of mild, let alone confluent, smallpox) will explain why, before the days of vaccination, only five persons out of a hundred escaped the disease and fully a quarter of those who contracted it died, while those who recovered were mutilated or disgustingly scarred for life, whereas *now* we only observe isolated cases and can control each and every outbreak,—we shall be everlastingly indebted to them. Of course, in overturning our foolish belief in vaccination to prevent smallpox, they will have to destroy our equally fatuous faith in the possibility of producing active or passive immunity to such other decimating diseases as typhoid fever, diphtheria, anthrax, etc., etc. In fact, all they will have to do is, to produce convincing evidence that these diseases, together with yellow fever, bubonic plague, malaria, rabies and many others are merely "accidents" which cannot be controlled by scientists (many of whom have ungrudgingly given up their lives to establish the fact that *they can be controlled*), and we as a profession will say "Thank you," acknowledge our idiocy and—go right along fighting Death as we have fought him from the beginning!

You see, WE KNOW.—These gentlemen only *think* that they do. They *think* all right but, unfortunately, run into the ditch because they can't *steer* their thinkers. With such, I say again, we have no quarrel. We sympathize with their disability and pass on.

Our quarrel is with the men who causelessly vilify and shamelessly slander us. Those who paint us as putrid pariahs propagating dis-

ease that we may profit thereby. Those who lay dirty, profane and violent hands upon our Professional Honor and Personal Probity! Those who call aloud to everyone who can hear, "Don't trust the dirty doctor; he is an Abortionist, a Robber, a Mountebank and Infernal Fraud. He will keep you sick to make more money and, if you're not sick, he'll see to it that you are made so."

With such individuals we do have a quarrel; first, because we know that, were it not for the herculean and heroic efforts of physicians, the human race would not be what it is today; and, secondly, because, being fairly clean, honest and red-blooded ourselves, we object to being slugged by simpletons, misrep-

want HERE. Of course, it would be indelicate in this connection to discuss the possibilities of the hereafter? One *may meet* Bolivar (I mean the Zip-Zip of Zion) and one may not. Anyhow, as that genial gentleman has consigned us all unreservedly to Sheol, I have an idea that we shall pass him going down as we go up. It frequently works that way. He has my best wishes for a speedy trip and a continuous display of the "Warmer Tomorrow" sign.

It is ten thousand pities that space cannot be given for a reproduction of the front page of this issue of "Leaves." Under an ornamental mortice containing the moderate insinuation:

VACCINATION

The Foulest of All the Foul Inventions of the Devil and the Dirty Doctors for the Creation and Spread of Disease, for the Debauching and Destruction of Humanity.

resented by morons and lampooned by lunatics!

THEREFORE—though the space could perhaps be used to much better advantage—I reproduce herewith just two of the strikingly beautiful cartoons which appear in Voliva's (Nor Bolivar's, please!—he's an elephant and intelligent.) *Leaves of Healing*, published as aforesaid at Zion City, Lake County, Illinois. These, I have to confess, need no "diagram and description." They shout aloud just what Voliva intended them to howl. Observe, however, that poor M. Banks, M.D., has just one silver dollar over each eye—a total of *two dollars*—the amount he usually "peculates" for going around to someone's home and relieving suffering or routing the Grim Rider himself! Voliva hasn't practiced medicine, or he would realize that the average physician commits only *petty* larceny, and usually dies—though full of good works—with a mortgage on his house and another (of the chattel variety) on his old bus. Much better, from a financial standpoint, to be an "Apostle."—

"O Zion, in thy Golden Halls,
Where Saints and Elders dwell..."
has an appeal all right if you want what you

We are confronted by two reasonably well executed photographs of an unfortunate girl in the last stages of emaciation, and with her nose and frontal bones destroyed. This young woman, we are told, "was vaccinated when a child and thereafter became a mass of running sores. She visited the City of Zion a few years ago and has since died." It would be unkind to suggest that the visit to Voliva's semi-defunct hamlet and her subsequent demise had anything in common; but, that would be about as reasonable as to state didactically

that *because* "she was vaccinated as a child, she became a mass of running sores and later died."

Moreover, even though the vaccination were proven to have been the cause of the poor girl's death, that does not detract one iota from the value of vaccination generally! It is

sad but true that no war was ever won without more or less heavy loss of life. No new lands have ever been opened for settlement but the way has been marked by the bones of pioneers. No great edifice of steel has been erected but some worker has laid down his life in the building. No ship sails the main but could find a full new crew in Davy Jones' locker, and no curative measure known to mortal man but may prove lethal

Mounte Bank, M. D

Member American Medical Trust
Member State Medical Trust
Member County Medical Trust
Member Politico-Religious Trust

SLOGAN

LEGISLATE
VACCINATE
OPERATE
PECULATE

Selected from the *Free Press* of Niagara Falls, Saturday, February 21, 1914



upon occasion to certain individuals!

As Bolivar (pardon me, I mean *Voliva*) says, "She suffered the tortures of hell and was a sight that would melt a heart of stone." Undoubtedly, she did and was. I am quite sure that any and every doctor who was asked tried his utmost to assuage her agonies (whether he was paid for his efforts or not) and that the mere fact that they could not materially help her caused *them* "the tortures of hell" also. Unhappily, there are some diseases we are only just beginning to master and from the illustrations and a fairly wide clinical experience, I would say that this was a case of that kind. How it was contracted, I have no information.

This case—and many another like it—is, of course, sad beyond expression. But, it does not warrant the final paragraph of the caption, "*The Time Has Come to Down the Dirty Doctors and to*

Drive Vaccination Back to Hell Where It Came From."

Nor, when we consider that the poor girl died some years ago and that today the preparation of vaccine virus has been so perfected that one may vaccinate thousands of individuals under proper conditions and never see even a sore arm. Merely the typical "seed pearl upon a rose leaf" with a resultant scar so small as to be negligible. Nevertheless, the *protection*, though not absolute (we do not claim to be Miracle Men), is so definite, so general, that eight out of ten ordinary physicians may practice for their lifetime and never even see a case of variola. And, if it does in some way enter a territory, general vaccination or revaccination renders the disease so mild that it becomes almost as innocuous as measles or whooping-cough to those who contract it and there is very little difficulty in preventing its spread in the community.

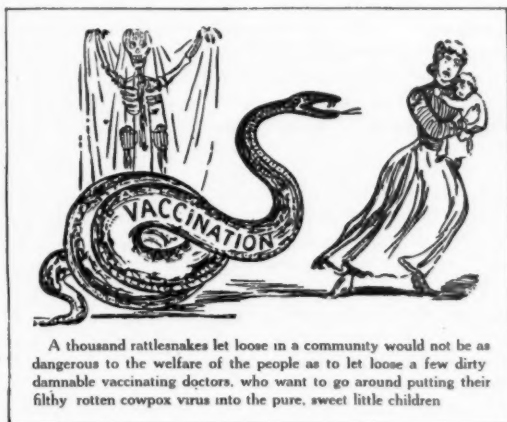
We, of course, know all this and vaccinate ourselves and our families. But there is a great class of people in this and every country

who are easily influenced, especially by what they read and see in illustrations and, to them, the *FACTS* are not known and they are quite apt to believe the Blaa and Buncombe they are bombarded with by Boneheads who think they *think*, but who really only succeed in having nightmares.

Buncombe Accusations

For instance, consider the brain capacity of the Simian who shrieks, "the Doctors vaccinate because they make money by it," "the Dirty Devils perpetuate Disease to profit thereby," and so forth, when, as a matter of fact, by vaccination, one of the most certain sources of profit to the physician was wiped off the face of the earth. Won't these cerebrally-constipated critics loosen up just long enough to realize that every time a physician vaccinates a patient for one or even two dollars, he puts away from himself the possible

chance of treating for a prolonged period a case of smallpox? And, if some of these two-cent thinkers would try concentration for a few weeks, they might get the idea that the physician they revile and abuse may perhaps receive a hundred dollars a year from all his



A thousand rattlesnakes let loose in a community would not be as dangerous to the welfare of the people as to let loose a few dirty damnable vaccinating doctors, who want to go around putting their filthy rotten cowpox virus into the pure, sweet little children

vaccinations—and he provides his own vaccine. He certainly makes nothing out of its manufacture. Moreover, any child can be vaccinated *free*. Very many of them are.

So, the "peculating physician" doing the work gets beastly rich. Indeed he does! So he does also when he stops an oncoming diphtheria with a "shot" of antitoxin. So he does when he urges his people to submit their children to the Schick test so that, if they prove non-immune to diphtheria, they may be made so by a few injections of toxin-antitoxin. Day by day, as a matter of *FACT*, the Doctor digs his own financial grave and, by practicing *PREVENTIVE MEDICINE* and teaching prophylaxis, serves his patients, even as Christ would have served—without thought of money or price.

That he must live and rear his family, he realizes, of course; and by unceasing work and the exercise of no mean skill and a keen intelligence, he just about manages to do so—unless he be one of those fortunate practitioners who have on their list a great number of chronically indisposed persons who pay cheerfully for being permitted to tell their more or less heart-wringing woes (differing monthly) to the family physician. Under such circumstances, indeed, he *may* acquire a small surplus—which usually some business-like individual cheerfully takes away from him! The really well-to-do doctors I know can be counted upon the fingers of one hand. And they, in nearly every instance, made what money they do have *outside* their profession. On the other hand, I know scores, yes; *hundreds* of men who have faithfully and to the very best of their ability practiced medicine for decades and are still highly gratified if, at the end of the year, they have a three-figure balance at the bank!

Peculators? I'll say they are—of the peanut variety. Usually so ornery that they rob themselves and their offspring to help out someone else who has *three* times as much as they'll ever own!

Zion and the Late John Alexander

But, to return to Bolivar (Voliva, I should say, but I *will* confound him with the elephant), his *Leaves of Healing* and Zeistic Zion: For those who reside out of the Middle West, I might say that Zion is a sandy area, situated between Waukegan and Winthrop Harbor upon the shores of Lake Michigan, and some forty-five miles north of Chicago. The land was acquired and a peculiar community established thereon, some years ago, by one John Alexander Dowie. He was a gentleman with a somewhat variegated past and an idea. The idea paid. He founded the Christian Catholic Apostolic Church, and those who accepted his doctrines worked (and what money they had, worked also)—for John Alexander.

To see John in his Apostolic robes and hear him denounce the devils who lived outside of Zion, was something to be remembered. When he talked about Doctors, Pork and Tobacco, your hair fell out! Dowie hated the pig and his products worse than Rosenberg and Lavinsky ever did, and "the Doctor" and "the Devil" were to him but two names for the same thing. He flourished wonderfully upon his brand of Blaa and, soon, factories, banks, a big hotel (it is some whopper of a caravan-

sary, now more or less occupied by memories) and a score of smaller industries dotted the landscape. Shiloh House, a pretentious edifice, sheltered the Apostle, his wife, some Myrmidons, and the celebrated "unkissed son." This debonnair youth (so his apostolic father proclaimed) reached his twenty-something year without having known the kiss of a female! John Alexander considered the latter "terrible creatures." Dowie Junior used to stand up on the platform and smirk at the mixed audience Dowie could always gather (because he was "so different" and bizarre) and with his eyes dare the devilish girls to touch his virgin lips. I never enjoyed the young man's confidence; so, cannot say whether or no any of them took the dare. But he wasn't such an awful looking simp and he probably got his—perhaps when he wasn't looking. After various extremely interesting blow-ups and endless suits of one kind and another (several being for the return of monies entrusted to his keeping by trusting females), John Alexander himself fell from grace, became hopelessly entangled with one of those never-to-be-sufficiently-abhorred women and died, not quite in the odor of sanctity. 'Twas a sore blow to Wilbur Glenn Voliva (I hit it that time), who had for long been his trusty first assistant; but he rallied nobly, took the Apostolic Mantle and the Helm and has been steering things through more or less turbulent seas ever since. Today, the industries (or most of them) in Zion are Wilbur's—or controlled by Wilbur. Witness the naive statement in *Leaves of Healing*.

"ZION INSTITUTIONS AND INDUSTRIES (Wilbur Glenn Voliva)"

Then follows the list.

Indeed, yes, Bolivar is some Elephant in Zion! Yet, there are rash residents who insist upon provoking—and even opposing—him. He puts up enormous signs and they tear 'em down. He appoints one chief of police and the rebels put in another. Generally speaking, Zion is not quite what it was—a fact that the whole state of Illinois is thankful for. Until the past year, for instance, the perfect road from this city to Milwaukee was broken only by a stretch of almost impassable morass constituting the main street of Zion. On entering and leaving the sacred soil, the autoist was confronted by huge hoardings warning him that he was in ZION where pigs, doctors, tobacco, etc., etc., were strictly taboo. On week days, if you broke your springs, the

Zion garage would fix you up for a price, but on the SABBATH, you could break down where and when you pleased (and you were more than apt to) without the slightest hope of getting more than a frozen stare from any Zionite. You had no business to move on that day. They didn't. Altogether, it was (and is) a cheerful spot—one you entered with regret and left (if you could get through) with great rejoicing—mixed with quite unwonted profanity.

Strange things have happened in Zion—even as they happen in the House of David, a perennial boil on poor Michigan's neck. But, W. G. keeps a stern hand upon the local publications and city reporters are frapped in that region.

"Leaves of Healing"

From such a place, then, and from such an individual, comes the *Leaves of Healing*—supposedly a semi-religious sheet devoted to Zion Propaganda, and no one would have the slightest objection to its publication, provided that its columns did not contain vicious calumnies and the thing was not being carefully and systematically foisted upon perfectly normal people by small boys who approach the unsuspecting housewife or maid, who answers the door, with a "Peace be to this house," hand her the *Leaf* and then collect a nickel. Just how many thousand *Leaves* have been spread this way, I cannot say. This particular neighborhood has been supplied most efficiently—and, with Hearst and DeKruif, Keefer and the minor ruck of detractors working night and day shifts, the Doctor is beginning to feel a faint aura of suspicion surround him in places! The Propaganda from Chiro, Osteopath, Naturopath, Omnipath, *et hoc genus omne*, is vicious enough. However, as already stated, at this particular time, for some particular reason (which one may inquire into later), the ordinary Doctor (never before quite so well equipped to serve the public) is getting,—well, call it what you like, but that's what it is! And Bolivar's *Leaves* is about the most saturnine slur of all. If he's doing it here, someone else will be doing the same dirty work elsewhere—and, perhaps, with more *savoir faire*, so to speak.

I'm really sorry that I can't show everyone of you the score of other pretty pictures in *Leaves*. You'd enjoy them immensely. There are babies in caskets, men with huge sarcomas, a lady with elephantiasis, children almost obliterated, and woefully crippled and twisted men in uniforms of all kinds. ALL of them

came to their sad estate from being vaccinated; some, years before, some, quite recently. Most of the "examples," however, seem to have lived in "Bloomin' Old Hingland, don't you know" and, if one may form a fair conclusion from what *Leaves* says, Leicester, England, must have had a lot of very careless Doctors, very poor vaccine, or a whole lot of unsuspected lues. Just which, who can tell? Of course, we know that the Brittishers *did* have a whale of an antivaccination fight on their hands some time ago. So, for that matter, have we, time and again. Moreover, some years since, the medical profession had the humiliation of finding itself using vaccine which was not what it should have been, by any means. But, *nous avons changé tout cela* and, today, the individual risk is so small as to be negligible, especially when proper precautions are taken.

Prevention of Smallpox

Rosenau ("Preventive Medicine and Hygiene," 1921.) opens his masterly work with this statement: "The prevention of smallpox depends primarily upon vaccination; secondarily upon isolation and disinfection. Vaccination was the first specific prophylactic measure given to man; it produces an active immunity to smallpox. On account of its importance and great practical value, this subject will be considered in some detail, for much of the antivaccination sentiment is due to ignorance or misconstruction of the facts."

But, Bolivar (pardon again, Voliva) reproduces letters and statements from physicians of various degrees of dignity, to the effect that "there are only a few doctors who believe that vaccination is beneficial or a preventive of smallpox." "Vaccination helps to spread smallpox." "Vaccination has stood for nearly one hundred years on three legs and is now fast tottering to a fall." "Vaccination is utterly useless," etc., etc., etc. *ad infinitum et ad nauseam*. "Ignorance" it would seem, or "misconstruction of the FACTS." And it is facts we need to present to the people whose welfare we hold in our hands. If space permitted, overwhelming evidence could be presented here that vaccination properly performed is practically devoid of danger and does protect the individual from smallpox for a period of years. Perhaps the claims which we are warranted in making could not be set forth more concisely than they are by Rosenau (loc. cit. p. 20).

Claims for Vaccination

1.—"Duly and efficiently performed, it will protect the constitution from subsequent at-

tacks of smallpox as much as that disease itself will.

2.—"It protects the individual against smallpox for a period which has not been determined mathematically for the individual, but which averages about seven years.

3.—"The protection may be renewed by a second vaccination.

4.—"Persons successfully vaccinated on two occasions are usually immune against smallpox for life.

5.—"Vaccination and revaccination systematically and generally carried out confer complete protection to a community or a nation. In other words, while the individual protection is not always lasting, the communal protection is absolute.

6.—"A person vaccinated once, and at a later time contracting smallpox, as a rule has the disease in a less serious form than unvaccinated persons (varioid). The degree of favorable modification of smallpox is in inverse proportion to the period of time elapsing between the vaccination and the attack of smallpox.

7.—"The beneficial effects of vaccination are most pronounced in those in whom the vaccine affection has run its most typical and perfect course."

In speaking of the dangers and complications connected with the procedure, Rosenau states:

Dangers From Vaccination Very Slight

"The alleged danger from vaccination has been greatly magnified by the antivaccinationists. However, vaccination is not always a harmless procedure; it must be looked upon as the production of an acute infectious disease, and, although the disease is always mild and benign, it must not be treated as trifling. The chief danger lies in the fact that we have produced an open wound which is subject to the complications of any wound. Even a pin prick or a razor scratch may result in death. While the aggregate number of deaths resulting from the complications of vaccination were considerable, the individual risk is now so small as to be disregarded, especially when proper precautions are taken. Many of the infections after vaccination occur in those in whom the regard for cleanliness is slight and who neglect the care of the wound. In recent years, owing to the improved quality of the vaccine virus and the introduction of aseptic methods, a bad sore arm is a rare

occurrence, and serious complications still rarer. *The danger connected with vaccination is infinitesimal when compared with the benefit conferred.*"

And further:

"As an illustration of how seldom complications are caused by vaccination, we have the results of Germany where, in thirteen years (1885-1898), 32,166,619 children were vaccinated. Of these, 115 died within a few weeks or months after the operation, presumably of injuries incidental thereto. Of these, at least 48 probably did not die as a direct result of the vaccination.

"The figures of recent years are still better; for, it is now exceedingly rare for a death to be recorded as directly due to vaccination.

"Ten million vaccinations in the Philippine Islands were done under the direction of American health authorities without the loss of life or limb. Of the millions of vaccinations done in the army and navy during the World War, there is not a single record of serious result. This clearly indicates that, with the use of a carefully tested virus and efficient technic, the danger is *nil*."

Which is enough in this particular place to prove the absolute idiocy of the antivaccinationists' attacks—if such proof were needed by any well-read, thinking medical man of the present day. BUT, even a course of intensive study of the subject could not make Bolivars, who hate Doctors and all their works, record a rational opinion on the subject, neither could it make men of this type realize the fact that hundreds of thousands of men, women and children dead from smallpox and an army equally as large surviving but ghastly disfigured would be more heart-rending than the few hundred victims of faulty vaccination! And most certainly nothing but entire reconstruction could make these slanderers of the doctor cease from seeing nothing but evil where only good is and imputing the vilest of motives to the most self-sacrificing *Service-giver* upon earth!

To limit their baneful activities, it would appear, we must drop the dignified mantle of reserve we have wrapped about ourselves and talk FACTS to those who are being fed upon fallacies and falsehoods.

A chain, Keeper, upon Bolivar's foot; he's "going bad!"

Let's Talk it Over

Active-Principle Materia Medica

With Physiological Effects and Therapeutic Suggestions

By WM. T. THACKERAY, M. D., Fowlerton, Texas

[Continued from February Issue, p. 139]

Asparagin

Glucoside from *Asparagus officinalis*, also found in the leaves of belladonna, great comfrey root, marshmallow, and it has been detected in liquorice root.

Physiological effects:—In small doses, it augments the urinary secretions and abates irritability of the urinary organs. It has been credited with aphrodisiac and emmenagog properties.

Crude asparagus sometimes causes urethral discharge like that of gonorrhea. The writer had the good fortune to prevent the suicide of a friend, who had indulged in fresh asparagus tips washed down with copious draughts of beer and who, some hours after, was told by his physician that he had a bad case. I was in time to assure him that his physician was unintentionally wrong, and saved the day. We afterwards had a three-sided consultation when his Doctor learned, for the first time, the sometime untoward effects of asparagus.

Therapeutics:—Asparagin has proved beneficial in cystitis and in some renal diseases, in the hands of the writer and some others, but its true place in medicine is yet to be determined.

Dosage:—1/64 grain at half-hour intervals, with water taken freely.

Aspidospermine

An alkaloid from *Aspidosperma quebracho*.

Physiological effects:—This alkaloid is a stomachic; promotes the appetite and aids digestion. It diffuses promptly into the blood, lowers cardiac action, renders the pulse less frequent, elevates, at first, the arterial tension and blood pressure and then lowers them.

The respiration is slowed and the sense of need of air is less impressive, at the same time the temperature is lowered. The hurry of circulation and of respiration, and the feeling of oppression due to active exercise are modified by its use. In large doses, it is a respiratory poison.

Therapeutics:—It is indicated in atonic

dyspepsia; its more important use is in the dyspnea of asthma, emphysema and other respiratory maladies. It has proved of value in every form of dyspnea: bronchial, cardiac, nervous, even in that of uremic origin, (Wood), as well as in spasmodic croup.

Dosage:—1/64 grain, repeated every fifteen minutes to effect in acute cases; 1/32 grain every three or four hours in chronic cases.

Doctor Waugh said of aspidospermine: "If the physician is not going to delve deeply into the active principles of quebracho, he would best content himself with two things, and should so fix them in his mind that they will stick forever. (1) Never use the extract under any circumstances if the alkaloids are obtainable; (2) always use aspidospermine to the exclusion of the others and learn how to use it right, remembering that it relaxes spasm, stimulates the breathing mechanism and slows and steadies the heart, effects desired in all cases of dyspnea. Give it right, and you will not be disappointed."

Aspidospermine Sulphate

The same physiological and therapeutic remarks apply as given under the alkaloid, the salt being more readily soluble and consequently quicker in action. Dosage; the same as the alkaloid.

Atropine

The principal alkaloid from the root of the *Atropa belladonna*.

Physiological effects:—Dryness of the mucous membrane of the nose, mouth, throat and larynx is produced by the direct application of atropine to these parts, and the same effects in a more positive manner follow the stomachic or hypodermic administration. Dryness of the gastrointestinal canal is also produced, but it is soon followed by increased secretion and peristalsis, as shown by the fluid condition of the stools and by their frequency.

Atropine in small doses increases the heart action and the number of beats, raises the arterial tension, stimulates respiration and raises the temperature. In persons of light

complexion, more especially in women, a full dose of atropine is frequently followed by a diffused redness of the skin, not unlike the rash of scarlatina, but lacking the punctated character of this eruption. At the same time, there is an increased redness of the fauces with some difficulty in deglutition from dryness, rendering the similitude to scarlatina more striking. Dilatation of the pupil is a conspicuous effect of atropine, whether dropped into the eye, ingested or used hypodermically. Direct application to the eye produces more prompt effects with a smaller dose. Both, the motor nerve trunks and the terminals, are depressed or paralyzed by this alkaloid and the function of the sensory nerves is impaired.

Therapeutics:—Useful in tetanus, hydrophobia, internal strangulations, gastralgia and the neuroses: hysteria, chorea and epilepsy. Also useful in accouchements, to facilitate labor by dilating the os uteri and regulating the contractions of its body. In ptalism, night sweats and incontinence of urine, atropine has an efficient action. It is also a valuable hemostatic by its action of driving the blood into the peripheral capillaries.

The delirium produced by this drug is of a transient character, and yields to its discontinuance.

Dosage:—1/250 grain every thirty minutes in acute cases. In subacute or chronic cases, the same dose every one, two or three hours, according to the necessity of the case and tolerance of the patient to the drug. It is relatively better borne by children than by old people.

Doctor Waugh said of atropine: "Of all the remarkable agents in the wonderful alkalometric armamentarium, none is of greater interest than atropine. The more the science of drug-action is studied, the greater is the tendency to lift this alkaloid into the place heretofore occupied by morphine, a monarch who has forfeited his crown by bad behavior."

Atropine Sulphate

The physiology, therapy and dosage of this drug are the same as those for the alkaloid. It is used more by reason of its quicker action.

Atropine Valerate

Physiology same as the alkaloid.

Therapeutics:—Chiefly indicated in deep congestions with general irritation and with internal hemorrhage; or in serious flux, as in cholera infantum, its action bringing the blood to the skin and the underlying structures, congesting the surface capillaries.

Dosage:—1/250 grain every half hour until effect.

Avenin

Albuminoid from the *Avena sativa*.

Physiological effects:—Stimulant and tonic, with slight sedative action on the reproductive organs.

Therapeutics:—Useful in relieving sexual passion, although not so effective as monobromated camphor. Spasmodic and nervous disorders, cardiac weakness, spermatorrhea and tense articular swellings are relieved by its use.

Dosage:—1/6 to 1 grain several times daily to effect. One grain in a glass of hot water will be followed by a sound sleep and a sense of rest and strength next morning.

Benzoic Acid

Obtained from gum benzoin by sublimation. Also obtained from less pleasant sources.

Physiological effects:—Possesses decided antiseptic and deodorant properties; arrests fermentation and putrefactive decomposition and is destructive to microorganisms, bacteria, vibrios, etc. Applied to wounds, it is free from irritating effects; it lessens suppuration and prevents decomposition.

Therapeutics:—Useful in catarrhal inflammation of the mouth and throat: The powder, dusted over the nail in onychia, or packed into the ear in suppuration in these organs, gives good results. The use of benzoic acid in catarrhal conditions of the urinary tract, in cystitis and non-specific urethritis, is strongly recommended. Also useful to reduce *ardor urinae* and general acidity in rheumatic diatheses.

Dosage:—1/6 to 1 grain every half to two or three hours as indicated.

Berberine

Is widely diffused in the plant world, but is obtained principally from *Hydrastis canadensis*.

Physiological effects: It exerts a special influence upon the spleen. It is a general tonic to the mucosa, improving secretion. An excellent stomachic and gentle laxative.

Therapeutics:—Useful in malarial enlargement of the spleen. It has a specific action on the aphthous sore mouth of infants.

Dosage:—1/6 to 1 grain, every half to two or three hours as indicated; in solution, applied directly in aphthous condition of the mouth.

Berberine Hydrochloride

A salt of berberine. Physiological effects and therapeutics the same as in the alkaloid. Dosage is the same.

Bilein

A scientific mixture of the alkaline salts of the bile acids as found in oxgall.

Physiological effects:—Produces prompt action in increasing the excretion of abnormal bile. It acts as a stimulant to the hepatic cells, causing an immediate increase of normal bile. As a result, putrefaction of the contents of the intestines is prevented and peristalsis increased.

Therapeutics:—As bilein is a solvent of cholesterolin, it is of service in cholelithiasis and should be combined with sodium succinate in this affection. The writer has met with good success in treating hepatic colic with this combination, after the spasm had been controlled.

Dosage:—1/12 to 1 grain, three times daily after meals. A morning saline is always indicated.

Bismuth Subgallate

Physiological effects:—Antiseptic, astringent and sedative to mucous surfaces.

Therapeutics:—Useful in intestinal catarrh, dysentery, gastric ulcers, subacute gastric disorders and in mild forms of infantile gastritis and diarrhea.

Dosage:—1 to 5 grains every four hours for adults; children in proportion. May be profitably combined with the sulphocarbolates.

Bismuth Subnitrate

Physiological effects:—Absorbent antispasmodic and disinfectant of the gastrointestinal tract; a sedative of the mucous membranes; a soothing application to inflamed or abraded skin, exerting its slightly astringent property.

Therapeutics:—Useful in dyspepsia, chronic diarrhea of children and offensive eructations. Topically, in the form of the oleate, in all cutaneous affections accompanied by ulcerations or abrasions, with a sense of heat, burning or itching.

Dosage:—1 to 5 grains as indicated.

Boldine

The active principle of *Peumus boldus*.

Physiological effects:—Increases elimination of urinary solids and the secretion of bile. It increases appetite and the digestion as well, showing a specific action on the liver. It has been found that it notably increased urea elimination, and especially the bile excretion, without affecting the circulation, the temperature, or the quantity of urine. This gives to boldine the character of a true hepatic stimulant.

Therapeutics:—Useful in jaundice, hepatic colic, chronic hepatitis, appendicitis. It is in fact a specific in all hepatic maladies, even for cirrhosis. It is also of value in some forms

of kidney diseases where there is a deficiency in the excretion of solids.

Dosage:—1/64 to 1/6 grain, the smaller dose given in free draughts of water every three or four hours, the larger dose may be given three times daily before meals, combined with sodium succinate when used for gall-stone.

Boracic Acid

Is a mild antiseptic but little used for internal administration, valuable as a dressing for superficial wounds.

Brucine

One of the alkaloids found in *Nux vomica* and in the *Ignatia* bean.

Physiological effects:—Checks oxidation of the blood and the excretion of carbonic acid; greatly increases reflex excitability; causes tetanic convulsions; and acts as a stimulant to the respiratory center, making the respirations deeper and quicker and causes the lungs to do more work. (Brunton)

Brucine is described by some as only a mild form of strychnine and completely represents it in small doses.

Therapeutics:—A splendid tonic for children and may be given freely to effect. While its tonic effects are identical with those of strychnine, the less toxic properties render it more safe with young patients.

Dosage:—1/128 to 1/64 grain every four hours may be administered to children of 12 years, with the smaller dose to younger subjects and increased according to age to meet conditions.

Brucine Hydrochloride

The physiology, therapeutics and dosage same as those of the alkaloid.

Bryonin

A glucoside from *Bryonia alba*.

Physiological effects:—A powerful hydragog cathartic. It also acts upon the kidneys, increasing their secretion. In large doses, it provokes gastrointestinal irritation.

Therapeutics:—Useful in atonic conditions of the liver, in dropsical effusions, pleuritis with effusion, pericarditis, pleuropneumonia and in stiff and painful joints from rheumatism. For convulsions due to intestinal worms, in scarlet fever to prevent ear complications, chronic orchitis, fevers and to relieve constipation.

Dosage:—1/64 grain every fifteen to thirty minutes in acute cases to effect; then one every two hours to maintain it.

Butyl Chloral Hydrate

(Croton Chloral)

Physiological effects:—Analgesic to the head with special influence on the trigeminal nerve. The reflex irritability of the limbs remains

intact for some time after it has been abolished in the head. Respiration and pulse are unaffected.

Therapeutics:—Useful in hyperesthesia, neuralgia, especially of the fifth pair, reflex excitability, myelitis, nervous cough, and for the relief of toothache. In addition to its analgesic effects, it is a valuable hypnotic for children. Effective in whooping cough.

Dosage:— $1/6$ to 1 grain, as a hypnotic, 2 to 3 grains, repeated every hour (if necessary) to effect. As an analgesic, 1 to 2 grains every half hour until effect.

Cactin

While originally classed as a concentration, it would appear that this depends, for its virtues, upon the alkaloid, Cactine, (Merck). At all events, it is properly the result of the evaporated expressed juice of *Cactus grandiflorus*. Cactoid (Abbott).

Physiological effects:—Acts more upon the sympathetic nerve plexus of the heart than upon the cardiac muscle. Does not increase the degree of ventricular or auricular contractions. Its office is, to act essentially as a regulator of the functionally disturbed work of the organ. (Waugh)

If the blood pressure is high, owing to vasomotor spasm, it slows and increases the amplitude of the heart's beat by lowering tension; whereas, if the reverse condition obtains, it restores normal circulatory tone, by improving cardiac innervation. (Abbott).

Therapeutics:—It is indicated in functional disorders where there is "fluttering" or a sense of constriction. It controls palpitation and cardiac distress of many forms of neurasthenia. The writer has used it with success in "tobacco heart" and other irregular action of the heart. It often prevents car-sickness and seasickness.

May be used to advantage in connection with strychnine.

Dosage:— $1/64$ grain, repeated every fifteen minutes until the effect desired is obtained. For prolonged administration, $1/64$ grain four times daily. Is absorbed readily through the mucous membrane and may be placed under the tongue for prompt effect.

Caffeine

Alkaloid from *Coffea arabica*, *Thea sinensis*, *Theobroma cacao*, *Paullinia sorbilis*, *Ilex paraguayensis*, *Cola acuminata* and *Ilex cassine*. Obtained from such a variety of sources, this alkaloid is believed to be identical in action as well as isomeric. However, clinical experience has demonstrated that Guaranine, from *Paullinia sorbilis*, is by far su-

perior in certain affections to the isomeric alkaloids from other derivations. This is probably due to some difference in molecular arrangement.

Physiological effects:—It is the most nitrogenous of all the alkaloids. A stomachic and slightly laxative. Upon the nervous and muscular system, caffeine acts as an excitant.

It acts upon the vasomotor centers, causing slowing of the heart, while it increases the force of the strokes, raises arterial tension, and lowers peripheral temperature. The renal secretion is increased.

Large doses paralyze the peripheral nerves of sensation, and increase reflex sensibility of the cord.

Therapeutics:—Useful in congestive conditions of the brain, in coma, vertigo, hemiparesis and in cardiac affections, with weak and irregular action.

Dosage:— $1/6$ grain to 1 grain every hour to effect.

Caffeine Benzoate

Same physiological and therapeutics as the alkaloid.

Dosage:— $1/6$ to 1 grain every two to four hours.

Caffeine Citrate

Used for the same purposes as caffeine, and in the same dose.

Caffeine Valerate

Physiological effects:—Analogous to caffeine, but a more potent antispasmodic.

Therapeutics:—Especially indicated when the nervous system is highly disturbed, as in shock from any cause other than surgical.

Calcium Iodized

Calx iodata, *Calcidin*. (Abbott).

Contains 15 percent of available iodine with 85 percent lime, starch and water.

Physiological effects:—While calcium is a valuable reconstructive, it serves here mainly as a vehicle for the iodine to which is due the peculiar therapeutic activity of the drug. The remedial power of iodine is, to stimulate the absorbent vessels of the body, which have become pathologically impaired, or which are normally unable to dispose of the adventitious matter which is not inherent in the body.

Iodine cannot be used internally, even in medicinal doses, for any length of time without producing untoward effects in the skin, nose, throat and eyes.

Children, however, are less affected, they being more tolerant of the drug, and they become more and more so under treatment when it is given in the form of an iodide, and above all, when it is given in the form

of iodized lime. Iodized lime does not often produce iodism even when given in maximum doses and for a prolonged period.

Therapeutics:—Croup, that scourge of infancy and childhood, when it is merely spasmodic, can usually be overcome with calcium iodized. However, the antispasmodics, aconitine, hyoscyamine, and apomorphine are also indicated as alternates, for the reason that the diagnosis cannot always be made between the true and false forms of croup.

It may not be easy to distinguish between a diphtheritic and a simple croupous membrane; and, while we cannot be sure of the efficiency of this remedy in the former, because we have a specific toxin to deal with, we are sure of it in the latter. Calcium iodized properly and persistently administered will rarely disappoint, and most frequently surprises the physician by the rapidity of its action.

It is important that no error in diagnosis be made, if positive results are to be obtained from the remedy; for, while it is certain to cure spasmodic or membranous croup in which it is promptly used, it possesses, alone, no curative virtues in diphtheria.

This drug is also of value as an absorbent in uterine fibroids, when given in small doses three or four times daily during a long period, even for one year. It is also a calmative remedy for dyspnea arising at night, especially from some heart affection; also the dyspnea of tuberculosis and that of asthma, where it is one of the best remedies in use. It is also useful in syphilis, where its action is much quicker than that of potassium iodide.

To sum up its uses, the physician has an efficient weapon against croup, both spasmodic and membranous, where it is practically specific; an efficient and reliable agent in most bronchial affections, through its alterative influence.

In dyspnea (whether due to pulmonary or cardiac disturbance) it proves of prompt service, as it does in asthma.

It rapidly causes a reduction and gradual absorption of fibroids of the uterus.

It is probably the most rapid and effective remedy for coryza.

It enables the practitioner to administer iodine in large quantities for a longer time without causing unpleasant systemic effects.

In goiter and all glandular disease, calcium iodized with nuclein will prove the most efficient means of relief.

Dosage:—1/3 to 5 grains. The small dosage is intended for long continued use as well as

acute necessities. For croup, in children, five or six 1/3-grain granules or tablets are dissolved in six teaspoonfuls of water and a teaspoonful is administered every ten or fifteen minutes to effect.

In subacute cases, or as a reconstructive alterant, 2 to 5 grains, every three or four hours, always to effect. In croup or influenza, where the symptoms are urgent, 1/3 to 1 grain in freshly made hot solution as above. Where prompt saturation of the system is desirable, as in syphilis, 5 to 10 grains or more every four hours. (Abbott).

Calcium Hypophosphite

This salt is essentially a reconstructive and is indicated where a tissue builder is required, especially in delicate, marasmic or rachitic children. Given in combination with nuclein and iron. In phthisis, scrofula, etc., the hypophosphites are always of service. They hasten bony union in fractures. They are useful in dental caries of growing children and, to nursing women, calcium hypophosphite may be given advantageously.

Dosage:—1/6 to 1 grain three times daily for adults; for children in proportion.

[Concluded from page 208]

regress that this profession has made. The progress is ours only if we make it our personal property, if we, individually, live up to it; if we do our darndest to apply all the knowledge, all the information, all the discoveries, in so far as they may enable us to benefit our patients.

Again: The physician should be neat and clean and look prosperous. He should be "manicured," as the Doctor has it. That is not dandyism. It is a proper deference to the desire of our clients to deal with personally and mentally clean medical men. The "manicuring" might be applied in every direction. It would do no harm.

In the last instance, we bet on the general practitioner, every time. Let him realize that he has gotten into a rut, and he will shake himself out of it. He is a mighty good doctor, is that general practitioner. Make no mistake about that. We know him, and we know what we are talking about.—Ed.

PLACENTA PRÆVIA CENTRALIS

On January 3rd, 1923, I was called at 2 a. m. to attend Mrs. H., aged 28, multipara 3. Her first two labors had been normal, with uneventful recovery.

As she lived twenty-six miles from my resi-

dence, and the snow was so deep that I could drive my car only half way, it was 4:30 a. m. before my arrival there.

I found Mrs. H. lying in a pool of blood. She was extremely pale, breathing rapidly, and complained of feeling very faint. I felt for the radial pulse and could barely get it. I examined the abdomen and found the fetal head high up and to the right side, with the placenta occupying the whole lower uterine segment. The bleeding was profuse. I could find no fetal heart sounds after a rapid examination and so concluded that the child was dead or nearly so, and decided to disregard it.

Now, we come to the interesting part of this case and to what really prompted me to report it; and that is: the difficulties under which I had to handle this case. I was twenty-six miles from the nearest doctor, had as my assistant an old lady who was afraid of the case and, in her excitement, had not even got any boiled water ready for me. There were two things for me to do at once. (1) Stop the hemorrhage and (2) give a saline. I had no sterile water ready, so I decided to do a Braxton-Hicks version and stop the bleeding. After washing up, I inserted my right hand into the vagina and found an os dilated to about four fingers, with the placenta completely covering the internal os and adherent all around it. I broke through the placenta and with the aid of my left hand on the abdomen, I did a version, bringing the half breech down. Traction on the breech lessened the bleeding considerably but did not stop it.

As yet there was no saline ready and my patient half dead. I gave strychnine 1/30 gr., and again 1/30 gr. five minutes later. This revived my patient. I brought down the other foot after dilating the os manually and delivered the child without any trouble, dead. I separated the placenta and brought it away.

Then I gave an ampule of P. D.'s ergot, which contracted the uterus down firmly and stopped the bleeding. I now prepared my saline and injected it under the breasts until my patient had so far revived that I considered her out of danger for the time being. It was not twenty-five minutes past five and I consider that I made fairly good time handling this case alone.

I remained with Mrs. H. until that afternoon and she felt fairly good, outside of feeling faint every hour or so. I sent a nurse down that evening, and she brought Mrs. H. through an uneventful puerperium.

Mrs. H. was put on elastic capsules of Blaud's mass, and her anemia gradually disappeared.

In conclusion, I may say that many of my brother physicians may not have handled this case just as I did. But, how else could one handle it, working under the difficulties that we work under in some parts of our Canadian West?

Star City, Sask. C. H. CARRUTHERS.

[Doctor Carruthers is to be congratulated on his success in this particular case! He thinks that some of his brother physicians might not have handled this case just as he did. Still, he qualifies that correctly by asking, how else could one handle it under the difficulties attending his emergency?

If this case had been in the city—it would never have happened. What we mean is, that the condition should have been recognized very early, the woman would have been taken to the hospital at once, suitable attention would have been given and, in all probability, the baby could have been saved. That, though, is not the question at all. The point at issue is that, being twenty-five miles away from any help, having not even intelligent lay assistance, the doctor succeeded in saving this woman's life when it had all but escaped. The loss of the baby, was quite unavoidable. The management of the case, after the condition had been diagnosed, was perfectly correct. The indications were, to deliver. Doctor Carruthers delivered in the quickest and easiest way possible. There simply was no other way.

Placenta prævia is one of the awful things that happen to doctors occasionally. We shall never forget the one experience of this kind that we witnessed, over thirty years ago. The result was the same as the one in the case before us. It is fortunate that these emergencies are not frequent.—Ed.]

CONAN DOYLE—THE SPIRITS— THE BIBLE

In the April (1922) issue of your Journal, I notice that you say "If the doctors' wives desire space in CLINICAL MEDICINE, let them say so." Being a doctor's wife and an interested reader of your splendid Journal, I am herein kindly asking for space to reply to two recent articles in your May and July (1922) issues, by Drs. Bryce and Candler, their articles headed respectively, "Communications from the Spirit World" and "In Re: Conan Doyle and the Spirits."

I have read these two articles very carefully. As a consecrated Christian and having read and studied God's Holy Word almost daily for the past 12 years, I feel constrained to point out the many errors and delusions contained in the first of these two articles (by Dr. Bryce). Not that I desire to offend the Doctor, but solely that I may be of some aid in helping him understand the *cause* of the misleading experiences he seems to be laboring under, which he so pathetically described in your issue. I do not deny or doubt that he had such experiences; but I am sure that he doesn't at all realize or suspect the channel through which they came to him. And this is just why I desire to come to his aid and use God's Word to help him see wherein he has been so misled by what he terms "phenomena."

In the first place, I wish to congratulate Dr. Candler on his sane views on spiritism; as, all through his article he "hit the nail on the head" in his exposition of what has become a dreadful wave over the whole earth, deceiving millions, giving them the false idea that the dead can communicate with the living and vice versa.

I was much amused by Dr. Candler's satire on spiritualism, under the caption of "Good Medicine." I perceive that he takes the matter up from the material standpoint, and I take it that, like most good doctors, he is too busy in the matters that pertain to his chosen profession to make a close study of the Bible and, therefore, depends very largely for scriptural knowledge upon what he has heard from the pulpits from time to time. One gets very little light on the subject of spiritism, mental telepathy, etc., from what is heard in the modern churches for, in our day, the preachers do not attempt to explain the deep things or difficult parts of the Scriptures—which accounts for general ignorance of spiritualism and the power back of it.

I gather from the Doctor's remarks that he really thinks that all these spiritualists are deceived by mediums and do not really get any communications from the spirit world. Herein *he* is deceived, for the Bible makes plain that there is a reality in spiritualism, but No Good in it! While people are deceived into thinking they are talking to their dead friends and loved ones, they are in reality talking with evil spirits who impersonate the dead, using the mediums to this end, as was the case with the Witch of Endor, used by the fallen angels to impersonate Samuel, who

was dead, thus deceiving Saul, and which was displeasing to the Lord.

—
Almost the whole world is being deceived today through mediums, table rappings, planchette and ouija boards and other demonistic contrivances. The mediums are often just as much deceived as their patrons. I should like to bring to the attention of the doctors in question, and of your other readers as well, what I find taught by the Bible on this matter, and will be as brief as possible and yet make the matter plain.

Surely, every true Christian will be willing to accept what the Bible has to say on any matter and especially on matters admitted by all to be difficult for the human mind to grasp. St. Paul declares, "He that is spiritual discerneth all things." Therefore, if there is any understanding of this matter set forth in the Bible, the earnest student should be able to find and understand it. Anyone who is acquainted with the Bible teaching respecting the condition of the dead knows that it is impossible for the living to communicate with the dead or for the dead to communicate with the living. The Bible most emphatically declares, "The dead know nothing," also, "The very day a man dies his thoughts perish"; they "return to the dust" and, so far as their death is concerned, they die just like the brute beasts and, while dead, they "sleep in the dust of the earth."

Of course, so long as we refuse to accept these plain declarations of the Scriptures and prefer to believe the Platonian theory that the dead are more alive when dead than they were when alive, we shall never get the truth as to spiritism, and are continually in position to be deceived by it. To be sure, if our dead friends were *not* dead, but alive in some spirit world, as most of the creeds teach and most professed Christians believe, they would naturally want to communicate with their friends this side the veil, and there would be much ground for believing in spiritism and for wondering, as the Doctor says, "why we do not hear more from them and in a more informative and intelligent manner." But, when we accept without quibble the plain statement of God's Word, we put ourselves beyond being deceived in the matter and in a position where we may ascertain the truth.

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Down in the Garden of Eden, when Satan tempted our first parents, we have the first ground for spiritism. God told Adam, if he sinned (disobeyed Him) he should *die* (lose

his life); Satan came along and denied it, telling mother Eve, "Ye shall not surely die," which is the foundation for the theory that the dead are not surely dead, but alive in some other state; and here is also the foundation for "talking with the dead." Ever since that time, our old enemy, Satan, has been trying to keep alive that lie told to mother Eve, and he has not only used "mediums" but also many professed ministers of the Gospel to deceive the people into thinking that our dead are not really dead. In our day especially, the vast majority of professed Christians have been taught that merely the body dies, but the soul is immortal (proof against death) and continues to live. Right here, I challenge anyone, preacher or layman, to produce any other scripture, except Satan's statement, to indicate that the human soul was or is immortal, or that the dead were alive anywhere, or that they either went to heaven or any other condition of life before the resurrection.

The closing paragraph of Dr. Bryce's article really gives the foundation for all this belief in spirit communication. The Doctor says, "I believe our souls are immortal." It seems passing strange that, in the face of the scriptural declaration that "The king of kings *alone* hath immortality" (1 Tim. 6:15, 16), anyone who makes the claim of believing the Bible to be the word of God could say "I believe our souls are immortal"! Stranger still that *doctors* who profess to believe the Bible should so say! Immortal means *death-proof*, and the Bible repeatedly declares that the *soul dies*. It even says that Jesus' soul died—"He poured out His soul into death" (Isa. 53:12). St. Paul declares "*All have sinned*" (Jesus excepted), and the plain statement of the Scriptures is, "*The soul that sinneth, it shall die.*" Although Satan said, when speaking to Eve in the Garden of Eden, "Ye shall not surely die," why should we prefer to believe Satan's lie on the subject rather than the repeated declarations of the Scriptures that there is no difference in the death of men and the death of beasts? The difference lies in the fact that, because our Lord "poured out His soul into death" for our deliverance, there is to be a resurrection of dead human souls, but not of dead animal souls (for the Bible speaks of the animals as souls but of a lower order than man). Again, St. Paul says that even the *Christian is perished* unless Jesus keeps His promise to awaken and resurrect them (1 Cor. 15:16-18).

St. Paul declares the Scriptures to be suffi-

cient to thoroughly inform the man of God (the Christian), and when we come to the word of God with unbiased minds, we find a reasonable, logical, proper and satisfactory answer as to what the soul is. In Gen. 2:7, we are plainly told that the combination of the body and breath constitutes the soul (sentient being). The body God created was not by itself a soul, neither was the breath with which he animated that body a soul, but the combination of the two, body and breath, makes a soul, and thus Adam "became a living (breathing) soul," as does every child and every lower animal that is born alive into the world. They *become* living souls, but do not *have* souls separate from their bodies. Therefore, it should be plain to anyone, and especially to doctors, that separating these two elements would destroy the soul. In His own due time, our Lord Jesus will *resurrect the soul*, giving it a new body, to "every seed (character) its own body" (1 Cor. 15:38) or being. In no place in the Bible is it even hinted that it is His intention to resurrect the body and, surely, any Christian doctor will agree with St. Paul that it is foolishness to think of the resurrection of the body that dies (1 Cor. 15:35-37)!

As to immortality, the Bible holds this to be the "Crown of Life" (the Divine nature), which only the Christian is invited to "seek" and "put on" during the Gospel age, and he must die to inherit it—"Be thou faithful unto death, and I will give thee a crown of life"—immortality. Rev. 2:10.

Doctors, who know all about the makeup of the human body, and who have never discovered the "soul" or seen anything to indicate the whereabouts of it, and who agree with Dr. Candler that we do our thinking with our brains, our seeing with our eyes, our hearing with our ears and "when we (as he says) see all the wonderful conglomeration of fluids and tissues through which we here move and have our being, die and are resolved into the elements, and that all the countless impressions we received during life perish as our cells cease to function"—are inclined to become unbelievers in Christianity because they have been taught to believe that the Bible teaches the manifest absurdity that we shall continue to think, feel, hear, talk, etc., after all our apparatus for thinking, feeling, hearing, talking, etc., are resolved into the elements, or, as the Scriptures put it, "Returned unto the dust." Therefore, it is not surprising that the honest among them, like Dr. Candler, would say, "The persistence of ourselves after

death savors to me of the child's faith in fairies and fairyland."

But, now, let us see what power is really back of spiritualism, and with whom do these mediums talk if not with their dead friends. For, there is no disputing the fact that they (the mediums) do communicate with beings who are not in material bodies, although most of these messages are "cheerfully vague" and "decidedly of no real importance," as the Doctor states. These messages *do* come from the spirit world, but *not* from the spirits of dead *humans*, but from *angels*, who, one time holy, left their condition of holiness and became *demons*, who have since delighted to get possession of the living on earth by obsessing and overthrowing their wills. Many of the inmates of insane asylums are thus possessed of demons. Our Lord, at His first advent, cast demons out of many. Today, thousands are thus afflicted. In Genesis it is recorded how the angels took the form of men and married wives of the children of men, and the result of this union was a race of giants (hybrids) call *nephilim* (fallen ones), and these filled the earth with violence. At the time of the flood, these were destroyed as men; that is, their assumed human bodies were destroyed and they were no longer permitted to materialize as human beings, or to return to heaven, their "first estate" (Jude, 6th verse), but restrained in our atmosphere, where they and Satan have been ever since and are now. In 2 Peter 2:4, the King James' translation says, they were "cast down to hell," but the word here translated "hell" is, in the Greek, *Tartaros*, which means the atmosphere (see Strong's or Young's, or any complete Concordance).¹

We have plenty of scriptural proof of how these evil spirits had possession of people in Jesus' day, and some were relieved of these evil ones by Him. Today we have many thousands in lunatic-asylums and a good many not yet in the asylums, who are possessed by these

evil spirits that gradually get possession of the wills. The Bible strongly warns the Christian to have nothing to do with occultism in any manner (Isa. 8:19, etc.), and also foretold that much of the evils of these last days is because of the evil influence of these "lying spirits" upon the minds of men. As it was in the days of Noah (just prior to the flood), so it shall be (again) in the days of the Son of Man, and so it is today; the whole world is full of crime and violence, daily increasing (2 Tim. 3:1, 2, 3, 4, 5, 13).

The delusions of poor Conan Doyle, Oliver Lodge and others are extremely pitiful and their false teachings are deceiving other poor blinded souls now groping in darkness. But, soon, He "whose right it is," will begin His reign, open all spiritually blind ears, and His knowledge and glory shall eventually fill the whole earth as the waters cover the seas.

I trust that what I have earnestly endeavored to set forth in this article may prove helpful to your readers and especially to the two good doctors whose articles inspired me to write in reply.

(MRS.) E. Y. WALKER.

Willard, Ga.

ANOTHER VIEW OF CONAN DOYLE'S IDEAS

I have just finished reading the abortively facetious article, written by Candler, on Conan Doyle's attempted explanation of what we may expect in a future life. One cannot read this sort of an article without realizing that ridicule is not argument.

Dr. Candler's article produces two very distinct impressions—the first is that the man is writing of a subject he knows nothing about and resorts to the pitiful expedient of trying to impress readers with his great erudition by displaying a knowledge of historical characters which read astonishingly like a Chautauqua book of ready knowledge.

The second impression is that Dr. Candler has written this article to try and find out what the other two members of his audience really believed, in order that steps might be taken to get all three in line. For I take it that the "I, Myself and Me" of the Doctor's ménage are never separated; neither are they ever alone.

Dr. Candler sums up his article by informing us that, after all, the best thing for the dear public is, to keep them in leash to the puerile teachings of the Brahma priesthood, as copied by the Hebrews, with change of names

¹The learned concordance writers are not quite correct when they render *tartaros* (Gr.), or *tartarus* (Lat.) with "atmosphere." The Greek-Latin dictionary defines *tartaros* briefly as *inferi*, which means, the lower regions. Bulfinch ("The Age of Fable") informs us that *tartarus* is a place of confinement of Titans, etc., originally a black abyss below Hades; later, represented as a place where the wicked were punished; and sometimes the name is used as synonymous with Hades. The "United Editors' Encyclopedia and Dictionary" relates, similarly, that *tartaros* was, according to Homer, a deep and sunless abyss, as far below Hades as earth is below heaven, and closed in by iron gates. Into *tartaros*, Zeus hurled those who rebelled against his authority, e. g., Kronos and the Titans. Afterward, the name was employed sometimes as synonymous with Hades, or the underworld generally, but more frequently to denote the place where the wicked were punished after death—the Lowest Hell.—Ed.

and a little added history, which is called the Christian Bible, after Constantine had had it fixed up to suit himself. I suppose the Doctor thinks (as did those of that order) that they must keep the people in subjection through their superstitions, and the thing worked and has continued to work more or less successfully ever since, in the Occident.

For those who think, the problem is not hard to read, for, like a ladder leaning towards Heaven, we can read in each step away from the fixed dogmas a wider-visioned set of beings, until now, after several hundred years, we look back on the teachings of Martin Luther, the great rebel, and wonder how there could have been minds that thought his teachings even bore the mark of radicalism. Yet, after the Bible teachings, as collected by Constantine, had been split up by over three hundred sects (all going to the same heaven), we witness the grand culmination of these teachings in a world war, the hideousness of which has never been duplicated in known history, and are treated to the spectacle of seeing every regiment of all these armies headed by a priest of the gospel of the meek and lowly Jesus; leading these unthinking hordes in earnest prayer that this great, humane God shall perch victorious on the banner of the supplicant and help them to cut the throats of their enemies.

Now as to Doyle's belief, that Dr. Candler has attacked so virulently, I must say, it seems to me that it at least presents something tangible, something worthy of second thought, and in many things perfectly in keeping with what we know of the laws of nature. It harmonizes with many of the known facts endorsed by science, and does far less violence to the workings of a logical mind than do the teachings of any religion thus far presented.

Dr. Candler asks, "Isn't all this infantile attempt to 'communicate with the unknown' born of fear, based on selfishness, etc.?"

The great law of self-interest, my dear Doctor, is the mainspring of all progress, it matters not what avenue of man's mental action is used.

Fear is the chief attribute of the ignorant, unthinking human and, were it not so, none of the religious beliefs extant would live a week.

Krishna, the great Hindoo illuminate, said (three hundred years before Christ was born) "The light dawns from the heart-dwelling, cave-abiding Ancient; to him who hath, by long dwelling on the self, seen him as God—hath neither joy nor grief."

Jesus said, "The kingdom of heaven is in

you—that shall ye seek first—all other things shall be added unto you."

And here is the great point that is missed by all followers of these teachings—the doing of the things that will bring the knowledge of the psychic laws.

If you take the teachings of Krishna and draw the parallel by placing his words in one column and those of Jesus opposite, they are almost identical, word for word. That does not vitiate the laws they taught, for a truth is a truth, no matter who discovered it, and if we can make the teachings harmonize with what our reason shows us to be true in nature, we can profit by adopting them, always remembering that, whenever these teachings do violence to logic, we must pass them by.

We can only reason by analogy. Hence we are compelled to ferret out the laws of the known if we would comprehend aught of the unknown.

Recent discoveries by science have shown that joy as well as anger will stop the flow of gastric juice and retard digestion. Thus we move up one peg in knowledge of the laws of mind and, incidentally, find a physical reason for observing the teachings of the great Hindoo and of Jesus in advising harmony of mind. We might write the formula thus: "He who would keep a healthy body, must keep an even mind, thus escaping joy and grief."

"The kingdom of heaven is in you" is merely another way of putting the same truth. Seeking it first is "Good Medicine."

Being then able to see the utility of these laws, on the physical plane—which is the known—we understand the logic of seeking to do the same thing for all the phases of mind. Therefore, any start in that direction, even thought as crude as is this one of Doyle's, is a step up the ladder and should be welcomed, not ridiculed or even contrasted with the childish twaddle that is woven about the philosophizing of the great mind of a past generation.

Dr. Candler quotes Flammarion and several other modern authors, with the evident idea of convincing the reader that the writings of these authors were pure imagination and, as such interested merely to show what the mind is capable of and to pass a pleasant hour. He has evidently not read Flammarion's book on dreams and on ghosts.

Flammarion (who, by the way, is a good Catholic, I understand) perhaps started his investigation of dreams and also of apparitions with the idea of proving their absolute unreliability as a physical manifestation or of

mental consequence. But, if that was his idea, he finished his work in a different frame of mind and said so—admitted the material existence of apparitions and said that he could not answer the problem wholly from the viewpoint of those who affirm that these apparitions are merely emanations from the subconscious mind.

This has invariably been the experience of all investigators—no brighter minds than those of Crooks, Meyers, Lodge, Russel, Hodgson, Riche and many others who have delved into the subject have almost inevitably been turned from the skeptics into at least tolerant searchers for further light, and have so thoroughly been convinced of the emptiness of all the religions now taught; and each has called upon his fellows to stop ridicule and get down to thorough investigation, at least to give the subject the same patient, tolerant attention that would be accorded to any other vital subject.

If "half a century of association with my fellow men" has only netted Dr. Candler the belief that existing conditions of man's mind should not be disturbed, and that he should cling to a philosophy which does violence to the thoughts of even a child, I do not hold him to be a very safe adviser of the human race. For, inborn in every being is a desire for progress, and progress is not attained by binding the mind back, which is the true meaning of the world "religion."

He says, would it not be perfectly ridiculous to imagine that those who have died can come back? Suppose they have never gone away. Suppose it is a fact that we change to another condition of life, just as happens now in some of the lower forms of life, and continued to live in another form or another, more attenuated, form. Would this be a very different thing from the changes that we now know are possible in this present form?

Suppose, for instance, tomorrow we should awaken to find that our eyes had changed in the night so that, instead of our being able to see objects only in the blue rays of the solar spectrum, we could now see them in all the other rays—ultra violet, red etc. Would not that be a marvelous transformation of our present world? Would we who could not see thus think it incumbent on us to sneer when told of the wonders now perfectly discerned by the new eyesight? Would we not be a parcel of fools to ridicule such a person, provided that he could give us convincing evidence that he did see thus?

Certainly, we should be obliged to admit that

this postulate is a logical one. Let us see what we can prove of this sort of speculation, in regard to things we do not see with our own vision.

Probably many readers of this magazine have seen Slater or Slade go down a dark corridor and find a pin stuck in the wall by someone else; or travel at top speed through the streets of a city and go straight to an article secreted in an obscure place, that an ordinary person could not have seen with his eyes uncovered. Thousands of persons have witnessed these things. You may call it muscle sense, clairvoyance, mind reading or what you like. The fact still remains that there are persons who have the ability to sense things not sensed by the commonalty.

Science has now moved up to the point where it recognizes the dynamic theory of life. She admits also that seven of the necessary categories necessary to prove a scientific fact have been complied with, or demonstrated to exist, in proving that there is a fourth dimension of space and also a fourth state of matter. Let us suppose that the other facts be cleared up, and the fourth state be proved.

Gustave le Bon has shown that all matter is negative electricity and that matter can be completely annihilated, also that all matter is in a constant state of vibration—incidentally proving the Hindoo statement that nothing is so permanent as the changelessness of change.

If it be true that matter is negative electricity and is in a state of radiation, when we remember that matter is surrounded by positive electricity, that we already harness and use to do work for us, then we can go back to the great Faraday and realize what it meant when he discovered that all matter is flanked by a charge of positive electricity and the charge is always equal to its valance or combining power with other elements.

Then we really have a positive electric form that corresponds to every particle of negative electric matter of which our bodies are composed.

We know that positive electricity exists in the surrounding atmosphere separately from negative electricity, and that we are using it in countless ways—if the dynamic theory is true, it would not be a wild stretch of imagination to guess that it would be possible for our positive electric form to separate from its negative companion and retain its shape constituting what we ignorantly call an apparition.

Faraday also showed that every electric cur-

rent is surrounded by an insulation of magnetism—perhaps the mind is formed in this and is retained as an aura of the form, since Le Bon has claimed such an aura does exist, and that animals can see it in the ultraviolet ray, see us as immense luminous creatures.

All these things give food for thought and the man who sits back, and ridicules, and urges us to cling to the follies of an ignorant age is the menace we should shun, and not men like Doyle who urge us on to investigate.

F. G. DE STONE.

Turlock, Calif.

FLUID EXTRACT CONDURANGO

In chronic and subacute hemorrhage of the uterus, menorrhagia in menopause, and in metrorrhagia.

Condurango, as described in Sajous's "Analytic Cyclopedic of Practical Medicine," is the bark of the *Gonolobus Condurango*, a vine grown in South America. It contains a yellow resin, tannin and two Glucosides.

Preparation and Dose:—Fluid-Extract Condurango, dose 1 fluid drachm; wine, dose 4 fluid-drachms; the decoction 4 fluid-drachms.

Therapeutics:—Condurango was first used in gastric carcinoma and gastric ulcer. It is now known that it has no effect on these diseases, but does allay pain.

A few years ago, on account of the high price of Fl.-ext. hydrastis and my inability to get the brilliant results from the drug in proportion to the price, my attention was called to the fact that Fl.-ext. Condurango was being used as a stomachic tonic. While I had great need of a stomachic, I had greater need of a drug checking uterine hemorrhages of all kinds. So, I proceeded to test it along the same lines as hydrastis is used for these complaints; such as hemorrhage due to fibroids, menorrhagia in the menopause, metrorrhagia, uterine hemorrhages of unknown origin, and hemorrhages caused by cancer of the uterus.

After about eight years of experience with the use of this drug, I find that Fl.-Ext. Condurango, given in 20-minim doses every two hours until required effect, then less often, is excellent and superior to any other drugs that are used in these conditions.

I consider it a specific in uterine hemorrhage after miscarriage or abortion, in hemorrhage during menopause, in metrorrhagia, menorrhagia, in postoperative hemorrhage, when the bleeding is prolonged after labor, or in any

chronic or subacute hemorrhage from the uterus. In short, condurango is indicated wherever the use of hydrastis is advised.

Now, as to bleeding from the uterus caused by fibroids, condurango will control it longer than any other drug and it will act with more dispatch. In cases of old fibroids with bleeding that has gone so long that one despairs to operate on account of loss of blood and weakness, I assert that this drug will control the hemorrhage, tone up the stomach and always give a more favorable case to operate upon. It causes no pain or discomfort in its action upon the uterus. It does not upset the stomach and it is a good alternative.

In cancer of the uterus, it will control bleeding longer than any known drugs and quicker. I use it exclusively on inoperable cancers of the womb.

The drug Fl-Ext. Condurango is non-poisonous in medicinal doses and not cumulative. The only strange effect I have ever had from the drug is as follows: In trying to make sure that, in excessive menstruation or bimonthly menstruation, I did get a correct and lasting effect, the drug was given a good while after bleeding ceased and the patient skipped the next regular time for her period, but with no ill effects.

I have called attention to the use of this drug to a number of my fellow practitioners who have reported on it very favorably.

C. W. MAXWELL

Philadelphia, Pa.

OLD DEVIL WORRY

Old Devil Worry, always sticking round.

We scarce have cracked his "noodle" with our will,

And sent him rolling down the trouble hill,
Till, lo, we find him taking firmer ground.
His pluck in sticking doth our thoughts astound;

Our hearts with anxious terrors doth he fill;
He prys into our business constant, till
Life's purposes and secrets he has found.

He daily springs upon the weary soul

Distresses which no mortal can control.

He poisons all the fountains of earthly joy,
Pollutes the waters sweet with prospects bright;

And then Old Worry doth our minds annoy;
From Hope's bright morn till Despair's gloomy night.

JAMES A. DeMOSS.

Thayer, Kansas.

What Others are Doing

SULPHARSPHENAMINE D.R.L.

Recommended for Subcutaneous or Intramuscular Use

Sulpharsphenamine is a recent addition to the list of potent preparations for the treatment of syphilis. It is prepared from arsphenamine, formaldehyde and sodium bisulphite, and its structure is similar to that of neo-arsphenamine, differing from the latter only in having a side chain containing one additional atom of oxygen. It has been largely used in France during the last three years and has had considerable popularity. Sulpharsphenamine D.R.L. is manufactured by the Dermatological Research Laboratories under license from the Chemical Foundation, Inc.

Properties.—Sulpharsphenamine D.R.L. is a light yellow, finely divided powder, dissolving very easily in water and making a stable solution. It contains on an average from 19 to 21 percent of arsenic, as compared with 18 to 20 for neo-arsphenamine and 30 to 32 percent for arsphenamine. It has the advantage of being stable, both in powder and in solution form.

Toxicity.—Careful tests of sulpharsphenamine have been made by Voegtlin (*Public Health Reports*, Nov. 10, 1922), who found it much less toxic than arsphenamine and comparing very favorably with neo-arsphenamine. Voegtlin says that "these preparations of sulpharsphenamine are far less toxic than preparations of arsphenamine or neo-arsphenamine which just fulfill the official requirements. This difference between the three drugs is still more pronounced when the toxicity of subcutaneous injections of sulpharsphenamine is considered, a fact which justifies the conclusion that sulpharsphenamine is a drug of extremely low toxicity as compared with that of arsphenamine and neo-arsphenamine."

The results obtained by Voegtlin have been verified in the Dermatological Research Laboratories, where it has been established satisfactorily that it compares favorably in toxicity with neo-arsphenamine D.R.L.

Trypanocidal Power.—According to Voegtlin, the trypanocidal power of the sulpharsphenamine, determined by himself, is about

the same as that of average commercial neo-arsphenamine on the market. The D.R.L. tests show that it has a marked trypanocidal action, but that it is inferior in this respect to neo-arsphenamine D.R.L. Likewise, as pointed out by Voegtlin, it acts more slowly upon the *Trypanosoma equiperdum* than either arsphenamine or neo-arsphenamine. This may be considered an advantage, in some instances at least, since "slow action of the drug upon the parasites might tend to prevent the occurrence of reactions due to the liberation of spirochetal material following the rapid breakdown of parasites."

Clinical Tests.—The literature on the use of sulpharsphenamine is still scanty. Doble (*Lancet*, July 31, 1920, p. 243) thinks highly of it, believing the hypodermic method of administration to be ideal for infants and those with inaccessible veins. He has had no side effects, and the usual contraindications did not appear to be as marked as in the case of other, similar arsenicals. He recommends the hypodermic method as being "fool-proof and practically painless." Montpelier (*Ann. Mal. Vén.*, Feb., 1921) complains of frequency of the nitritoid crises following the use of sulpharsphenamine. He believes, these can be avoided by making injections very slowly. As a matter of fact, others assert that these reactions are unusual when sulpharsphenamine is used. Crawford and Fleming (*Lancet*, Oct. 1, 1921) give their experience in the treatment of thirty-five children, in which they found the drug less efficacious than arsphenamine. Papagaay and Rinsema (*Acta. derm. ven.*, July, 1921), after an experience with 91 patients treated subcutaneously with sulfarsenol (sulpharsphenamine), prefer to treat these cases with neo-arsphenamine intravenously. Powell, quoted by Voegtlin (*loc. cit.*) states that one case of primary syphilis in a sailor, treated with 0.4 Gram of sulpharsphenamine showed complete disappearance of spirochetes from the chancre after 24 hours.

In a later report (*Lancet*, Jan. 13, 1923), Doble praises sulpharsphenamine very highly. He says, "It is the only one of the arsenobenzol compounds which can be given by injection into the muscles or subcutaneous tissue without causing great pain." The results ob-

tained with the drug have been uniformly good, comparing favorably with neosalvarsan." He has treated a number of cases that have reacted badly to the other arsenicals and that have been refused treatment on account of dermatitis, jaundice or other complications.

Doble says that, in the treatment of infants, there is no drug to touch sulpharsphenamine; and that with it the pregnant woman can be treated right up to the birth of the child.

Sulpharsphenamine D.R.L. has been given a careful clinical trial in a well known Philadelphia hospital, where it was used mainly by the intramuscular route. Injections into the gluteal region were found practically painless in the majority of cases. No reactions were observed, and clinical results, shown by the disappearance of lesions, were exceedingly satisfactory.

Method of Administration.—Sulpharsphenamine D.R.L. may be given by the intravenous, subcutaneous or intramuscular routes. Doble and most others prefer intramuscular injections. For intravenous administration, it is believed to be markedly inferior to neo-arsphenamine D.R.L., the efficiency of which is so well demonstrated that its replacement by sulpharsphenamine is not recommended when the neo-arsphenamine is available. Sulpharsphenamine is believed to be the arsenical of choice when it is necessary or desirable to give the remedy by the subcutaneous or intramuscular route. In the treatment of children or when the veins are small or inaccessible, this method of administration is often to be preferred. Dilute solutions injected hypodermically produce a slight burning sensation at the site of injection. Pain is even less noticeable when more concentrated solutions are employed, although intramuscular injections cause some local reaction; which, however, is much less severe than those following similar injections of arsphenamine and neo-arsphenamine.

Five- to 10-percent solutions are frequently administered, but Voegtlin and Powell recommend the use of 20- to 30-percent solutions. The drug may be injected subcutaneously beneath the scapula or loose skin of the forearm, or intramuscularly into the buttock.

Dosage.—Sulpharsphenamine D.R.L. is available in doses of 0.2, 0.3, 0.4 and 0.6 Gram. If it is desired, treatment may be begun with the smaller doses to establish tolerance and then these may be gradually increased. The doses most employed are 0.4 and 0.6 Gram, and these may be injected every other day, twice a week, or weekly, according to the

requirements of the case. The general treatment of cases is the same as recommended by experienced syphilographers.

Present Status.—It is at present impossible to give a definite opinion as to the exact field of usefulness of sulpharsphenamine as compared with the older and better known arsphenamine and neo-arsphenamine. That it is a curative agent of value in the treatment of syphilis, has been demonstrated. However, its future can only be determined by exhaustive clinical work. As Voegtlin says, "We strongly emphasize that, before this drug can be introduced for general use, it will be necessary to give it an exhaustive trial as to its curative power in human syphilis. There is no way to predict the outcome of this trial. The clinical studies especially will have to consider whether or not sulpharsphenamine has, for normal and syphilitic tissue, the same penetrating power as, or better than, arsphenamine and neo-arsphenamine. After all, the main difficulty with the arsenicals in present use appears to consist in their failure to reach the last spirochetes which may be buried in lesions that are difficultly accessible. It is obvious that incomplete sterilization of the patient due to this cause will prevent a cure and will cause, sooner or later, clinical relapses."

It is recommended that Sulpharsphenamine D.R.L. be given a careful clinical trial, especially in cases not suited to the intravenous treatment, as, for instance, in infants or young children, in adipose patients, those having veins not readily accessible, in cases subject to troublesome reactions from the older arsenicals (as described by Doble, in the preceding), and for administration by physicians not thoroughly skilled in the technic of intravenous medication.

It should be remembered that the field of the arsphenamines is not confined to syphilis. Sulpharsphenamine has been used in malaria, smallpox, and in the complications of gonorrhea. Doble has treated nearly 300 cases of gonorrheal arthritis, hyperkeratosis and epididymitis with this drug, and likes it very much; he has never failed to stop the pain of epididymitis in a few hours and reduce the pain and swelling in a few days.

THE DEFENSIVE FUNCTION OF THE THYROID

"The defensive function of the thyroid is well shown in tuberculosis." This statement was made by Solomon Solis Cohen, the other

day, at the Philadelphia County Medical Society, but the following one was still more important: "Whether the great value of iodine in early tuberculosis is due to stimulation or supplementation of this function, is still an open question." But it is very clear that some of the things that we have been noting in our clinical experiences and crediting to drugs were in reality of pharmaco-endocrine origin, and it is very probable indeed that the advantages that have accrued from iodine therapy, not merely in tuberculosis but in other conditions, have been due to its remarkable selective influence upon the function of perhaps the most remarkable factor in the regulation of the chemistry of the body—the thyroid gland.—[*The International Digest of Organotherapy.*]

THE ACTION OF CARBON TETRACHLORIDE ON THE LIVER

With the suggestion of carbon tetrachloride being employed as a vermifuge, it naturally became necessary to determine whether this drug exerted any unfavorable action upon the organism. As a matter of fact, Smillie and Pessoa reported that, in small doses, carbon tetrachloride produced a definite fatty degeneration of the liver and kidneys of dogs. Consequently, before using this drug generally in Ceylon as a vermifuge (against ankylostoma, ascariis, trichuris, oxyuris, etc.) it was believed advisable to ascertain whether corresponding lesions were produced in man. Docherty and Burgess (*B. M. J.*, Nov. 11, 1922, p. 907) referred to Leach's report that, on autopsy, no microscopical change was noted in liver or kidneys following a dose of 12 Cc.

These authors treated two condemned men, with the approval of the superintendent of prisons and with the personal consent of the prisoners themselves. One of these men received 5 Cc. of carbon tetrachloride, the other one 8 Cc. in two doses (5 and 3 Cc., respectively). The anthelmintic was given on an empty stomach in the morning, followed by tiffin of rice from one and one-half to two hours afterwards. One of the men received a post-purge of one ounce of saturated magnesium sulphate solution, three and one-half hours later. The second received the same purge, eight hours after treatment. A third prisoner, who had received 5 Cc. of the carbon tetrachloride and had become nauseated, vomited the magnesium sulphate solution given eight hours later and refused a repetition.

On autopsy, it was found that carbon tetrachloride in 5 Cc. doses produced microscopical lesions in the liver in two cases. On this account, the authors deem it inadvisable to prescribe even as much as 5 Cc. with purgation, and certainly not without it. It is apparent also that this dose as a maximum borders on the danger line. A safe maximum seems to be 3 Cc., since it has been given to a number of patients in Ceylon without producing any feeling of discomfort, though so far no autopsy has been performed on any individual so treated to ascertain whether or not the kidney or liver was injured.

From its action as a vermifuge, the authors agree with both Leach's and Hampton's and Nicholl's report that it seems to be practically specific for ankylostomes, fairly efficient in the removal of *Ascaris lumbricoides* and *Oxyuris vermicularis*, and of little value in the elimination of *Trichuris trichiura*.

CHRONIC APPENDICITIS AND INTESTINAL TOXEMIA

In young children, when chronic appendicitis has been diagnosed by means of the x-ray bismuth meal, and there are many symptoms of intestinal stasis and toxemia present, there are two ways of dealing with such a condition. One, the removal of the appendix, which only relieves the appendicular condition; the other more laborious but often more effective, as it directly acts on the whole of the intestinal tract and general system. It is a combined treatment, namely:—

- 1.—An autogenous heterogenous antigen should be prepared from the fauces (nose and throat swabs), as it has been claimed for many years that tonsillar and appendicular tissues are similar, and identical bacteria are found in both places in the same individual.

Also, a similar antigen should be made from the feces, obtained aseptically (heat resisting and spore-forming bacteria should be excluded from the antigen). These antigens should be mixed before use and injected as usual.

- 2.—A careful dietary should be ordered.

- 3.—Intestinal antiseptics should be given, such as hydrargyrum cum creta, cyllin, kerol or beta-naphthol.

- 4.—Abdominal massage should be done according to the evidence of the bismuth meal findings.

When all these are carried out simultaneously, it may not be necessary to resort to operative interference.—*Nutrition and Pediatrics*. First Quarter, 1923.

Among the Books

NICHOLS: "CARRIERS IN INFECTIOUS DISEASES"

Carriers in Infectious Diseases. A Manual on the Importance, Pathology, Diagnosis and Treatment of Human Carriers. By Henry J. Nichols, M. D. With a section on Carriers in Veterinary Medicine by R. A. Kelsner, D. V. M. Baltimore: Williams & Wilkins Company. 1922. Price \$3.00 United States, \$3.25 Canada, \$3.50 other countries.

Here is a monographic treatise of convenient length (184 pages) dealing with the carrier problem. According to present views, chronic carriers, who constitute more or less permanent reservoir of pathogenic microorganisms, are able to infect their environments and contacts and may become responsible for epidemics. Whether or not this view will continue to be held (and it seems to us that it is an extremely plausible explanation for a great many epidemics of infectious diseases, especially those in circumscribed neighborhoods), the study of the problem is extremely important. It affects virtually every single phase of the physician's work and influences his management of cases as well as the patients.

Quite indubitably, physicians all over the country, especially general practitioners, should study this little book with great care.

In view of the fact that the author has had a large amount of personal experiences as a member of the Army Medical Corps, we may be sure that the teachings are those held by leading authorities and by most competent workers in this particular field.

SCOTT: "ENDOCRINE THERAPEUTICS"

Endocrine Therapeutics. Practical Suggestions. By Thomas Bodley Scott. Philadelphia: P. Blakiston's Son & Co. 1922. Price, \$1.50.

This little volume was foreshadowed in an earlier book by the same author ("Modern Medicine and Some Modern Remedies," New York, 1916) in which he expressed the opinion that the great future in therapeutics belongs to the organic animal remedies, to the ductless-gland extracts and to organic chemistry.

Speaking of endocrine therapeutics in general, the author asserts that it fulfills the original meaning of therapeutics in that it includes the prevention as well as the cure of disease, the way of health, the way of life versus health. Endocrinology is beginning to revolutionize medicine. The author asserts that it is a new science and that its influence upon therapeutic thought is not a renaissance but an entirely new birth opening up unthought vistas. In therapeutics, he says, we must, above all things, keep the open mind. Our knowledge of disease and what we call health is so small that humility is the only true mental attitude, but it must be humility stimulated by hope and encouraged by success.

The author is not only a physician but also a philosopher, an optimist and a proponent of the new school of physicians who insist upon treating their patients as individuals, as thinking and feeling entities rather than as disordered engines. He accuses physicians of being too persistently objective. "The poor owner of the diseased body is almost left out of the problem, and yet in him lies the very fountain of successful healing, a source however, that is often sealed, stagnant and sometimes, alas! that is in opposition; counter-suggesting and frustrating the good we would gladly do."

Altogether, Doctor Scott's book on endocrine therapeutics is not to be consulted only for a practical and hopeful description of the subject. The author is full of kindly, optimistic, human advice. His text is interspersed with numerous pithy, appropriate aphorisms and epigrams. Above all, his definite and assured confidence in the possibilities of endocrine therapeutics is to be acclaimed. It differs so markedly from the adverse, vociferous, abusive criticism that is expressed in the latest issue of *Hearst's International* by that remarkable critic of the medical profession, one Paul DeKruif, who, not being a physician, still deems himself eminently fit to preach to medical men. Not that he uses any thunder of his own, except vilification and clever language. His material is quite evidently a reproduction and a rehash of what "the keepers of the temple," have set before him. In his

latest diatribe, DeKruif admits, necessarily, the possibilities for good contained in endocrine remedies, but he denies that there is any salvation in the makers of these preparations, consigning them all to the devil for their commercialism, for putting up such remedies for gain.

We confess that we prefer constructive, encouraging books like the one presented by Doctor Scott to the prejudiced vaporings of certain "Reformers" of the medical profession whose greatest forte is that of "the spirit that denies."

REPORT ON EDUCATION

Chamber of Commerce of the United States. Majority Report of Special Committee on Education. Participation of the Federal Government in Education. November 20, 1922.

The most important subject, we are informed, submitted to the Committee mentioned in the title, is the question of federal participation in education.

Shall the states continue to maintain and be responsible for the public schools of the country?

Shall the National Government take over the support and control of the schools?

Shall there be a divided support and control, partly vested in the National Government and partly vested in the states?

From this outline, as it were, of the contents of this pamphlet, our readers can form an opinion of its scope. It is of importance not only to fathers of school children but to all citizens. We believe that copies can be secured by addressing Mr. James J. Storrow, 44 State St., Boston, and we urge physicians to study this report with care.

TO AMERICAN WOMEN

Here is a little pamphlet of twenty-four pages containing a plea to American women as members of the responsible American public. The plea is:

That women assess anew the value of the intimate and unending service of chemistry to home, community, and country:

That they weigh afresh the obligation resting upon us all to bring our country abreast of the world's foremost nations in this branch of knowledge which literally underlies our physical and our economic life; and

That to meet this national obligation women do their obvious parts in their accustomed walks of life.

The text deals with the progress and victories of modern chemistry; it shows how chemistry enters all phases of life, how it interests (because it concerns) everybody, and how women, especially, are affected by the status of chemical problems.

JOHNSON: "COLLECTION OF NOTES"

Dr. Johnson's Collection of Notes. Please Consider This a Personal Talk. Copyright 1919 by C. L. Johnson, M. D. Ripley, Tenn. Third Edition, Reprinted 1923. Price, \$1.

This pamphlet contains thirty-two pages of "Notes" excerpted from numerous medical journals and arranged according to therapeutic indications for the various remedies and methods suggested. A few methods (such as autotherapy, for instance) are included.

While it must be admitted unhesitatingly that a good many of these therapeutic suggestions are very serviceable, we doubt the advisability of the plan itself. The collection strikes us as somewhat uncritical, and the physician who is actually in need of therapeutic suggestions will have to go it rather blindly. That practitioner, who would employ such hints logically, will rarely be forced to resort to this sort of "Notes."

The proof-reading is rather faulty. There are numerous printers' errors and even some offenses against grammar. We are informed that a new edition is just off the press and that it is to be sold at the price of \$5.00.

"NUTRITION AND PEDIATRICS"

Nutrition and Pediatrics. A Quarterly Gazette on The Diet and Disorders of Infancy and Childhood. 56 Osnaburgh St., London, N. W. 1. Price 2/6 for one year.

Here is an attractive little journal of which a specimen copy has just come to our attention. It contains a number of valuable articles, such as, "The New Science of Nutrition"; "Vaccine (Antigen) Therapy in Childhood"; "Simple Ailments of Childhood (1) Coughs and Colds"; "Milk and Infectious Diseases." The articles are well prepared and are helpful.

In the editorial comment, it is said that every generation or decade has its predominant medical interest. During the past generation, the most active subjects of medical investigation have been those relating to bacterial infection. Today, nutrition and disorders of nutrition seem to have become the central theme of interest.

That being the case, a journal devoted to this special subject, to the study of diseases of the metabolism and other ailments in children must be welcome.

ROSENAU: "PREVENTIVE MEDICINE"

Preventive Medicine and Hygiene. By Milton J. Rosenau. Fourth Edition. New York: D. Appleton & Company. 1921. Price, \$10.00.

Rosenau's book is one of the outstanding treatises on preventive medicine and hygiene. The subjects that are covered in it are so greatly everyday problems that general practitioners can not afford to forego its study. This will appear clearly from a simple enumeration of the sixteen sections covering the 1500 pages of text, reference to which is greatly facilitated by an index occupying over 60 pages. The sections are as follows: Prevention of the Communicable Diseases; Mental Hygiene; Public Health Measures and Methods; Immunity, Heredity, and Eugenics; Food; Air; Soil; Water; Sewage Disposal; Refuse Disposal; Vital Statistics; Industrial Hygiene and Diseases of Occupation; School Sanitation and Personal Hygiene; Disinfection; Military Hygiene; A Laboratory Course in Preventive Medicine and Hygiene.

The author is a successful teacher, which is made very evident by his clear and lucid manner of writing and his illuminating explanation of difficult problems.

For the general practitioner, who is pestered by the idle but, nevertheless, annoying and vociferous claims of antivaccinationists, the first chapter, that on smallpox and vaccination, will be particularly valuable, because it presents so incisive an argument in support of the great services to mankind accruing from and through vaccination that no lucid thinker can close his mind to the benefits derived from this method of disease prevention. The problem of immunity also is discussed in great detail and should form the subject of participation will be enabled to deal all the better with many of the problems that are submitted to him.

larily careful study. Through an understanding of the questions contained in it, the prac-

ROBINSON: "SEXUAL IMPOTENCE"

A Practical Treatise on the Causes, Symptoms, and Treatment of Sexual Impotency and other Sexual Disorders in Men and Women. By William J. Robinson, M. D. Eleventh Edition, Revised and Enlarged. New

York: Critic and Guide Company. 1923. Price, \$5.00.

The first edition of Robinson's book on sexual disorders appeared in 1912. Ten years later, the eleventh edition was launched. That is not a cause for astonishment, if it is remembered that Doctor Robinson has made this particular subject one of his peculiar care and attention. Besides, his incisive style attracts and convinces.

Robinson's book is undoubtedly a complete treatise on its special subject. The views which he voices and on which he bases his discussions and his methods of treatment are sound, because they are conservative in the best sense of the word. They are sensible. Moreover, Robinson is practical. Reading his discussions, his case histories, the concrete advice he gives patients, one gets something that can be used, that can be put into practice. For that reason, we do not feel that we are straining the truth by saying that this work "gets better and better" with each succeeding edition.

DAVIS: "IMPOTENCY AND STERILITY"

Impotency, Sterility, and Artificial Impregnation. By Frank P. Davis, M. D. Second Edition. St. Louis: C. V. Mosby Company. 1923. Price, \$2.25.

The author finds that more women consult physicians for relief from barrenness than formerly. He claims that the majority of cases of impotency and of sterility may be relieved and he declares properly that it is the duty of the physician to afford that relief and that he may not put off patients, as used to be done altogether too much, in years gone by.

The first edition of this little book appeared, it will be recalled, in 1917. The second edition contains several important additions and is virtually a new book. Much of the material is dictated by the author's personal experience in active practice and has proved, he informs us, generally successful with his patients.

Doctor Davis is evidently an active therapist. In addition to general and local treatment, he refers to a considerable number of drugs as being indicated in various conditions of irregularity in the sexual functions. Some of these remedies are rather apt to make us smile; for instance, graphite, which is suggested in the first and second Homeopathic dilutions.

We believe, however, that the little book possesses merit in many ways.